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**GOVERNMENT OF INDIA
TARIFF COMMISSION**

REPORT
ON
The Continuance of Protection
TO
The Automobile Industry

BOMBAY, 1968

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सत्यमेव जयते

GOVERNMENT OF INDIA
MINISTRY OF COMMERCE

RESOLUTION

Tariffs

New Delhi, the 9th Nov., 1968.

No. 8(1)-Tar/68.—The Tariff Commission has submitted its Report on the continuance of protection to the Automobile Industry on the basis of an inquiry undertaken by it under sections 11(e) and 13 of the Tariff Commission Act, 1951 (50 of 1951). Its recommendations are stated below. Professor K. T. Merchant, one of the three members of the Tariff Commission who have signed the Report has in a note of dissent expressed views different from those of the other two members on recommendations No. (8), (9), (30), (31) and (42) and his views have been briefly given in brackets below the said recommendations.

- (1) Protective rates of duty on components may be withdrawn and revenue rates of duty imposed instead.
- (2) The ancillary industry [components assessed under I.C.T. items 75(9), 75(10), 75(11), 75(12) and 75(14)] should, however, be regarded as protected as in the case of the main automobile industry in view of the quantitative restrictions on imports.
- (3) In so far as the automobile ancillaries are concerned it is immaterial whether a higher quantum of protection is fixed except in so far as these components are concerned, which cannot be manufactured in the near future in the country. Certain suggestions in this connection are given in paragraph 29.15 of the Report.

(ii)

- (4) The automobile ancillary industry is an important adjunct of the main automobile industry and has begun to grow steadily more recently. Its development needs, therefore, to be carefully watched. A review of the industries again after a period of two years is therefore proposed.
- (5) The automobile industry has to remain under protection until such time as it can stand on its own legs. The industry has not yet matured although it has had its beginning nearly two decades ago. There is no practical alternative but to let the industry continue under the present scheme of protection. Even if it could be argued that the industry was able to withstand competition from abroad, reasons of balance of payments would have necessitated the continuance of the present position.
- (6) Protection in itself is not a formal declaration but a practical measure which operates under certain stated conditions. To remove the surveillance over the functioning of industries merely because of the formal substitution of nomenclature relating to duties would not only be unrealistic but unfair to the consumer and also to the economic growth of the country. Where effective protection is maintained through quantitative restrictions on imports the necessity for periodical review is even greater than in the case of industries which are subject to protective rates of duty.
- (7) It is erroneous to suppose that the review that is periodically conducted by the Tariff Commission is only with a view to modifying rates of duty. De-protection should not in practice mean the replacement of tariff duties by quantitative or quota restrictions but relaxation of restrictions.
- (8) As matters stand, it is not possible to indicate whether any of the units manufacturing commercial vehicles could be considered uneconomic while all the units manufacturing passenger cars would be considered to be smaller than required for the economic size. The reasons for such a situation

(iii)

are historical, since each of the units manufacturing passenger cars started from assembly operations at which stage the question of an economic size for manufacture is not of much relevance. Until the economic level of production is reached by the present manufacturers it would not be advisable to licence any additional unit.

[Professor Merchant has expressed the view that since the existing units do not hold out hopes of reduction in costs, there is no alternative but to allow new entrants who promise to do so.]

- (9) The proposition of setting up a new unit in addition to those already in existence is not considered in the least advisable or desirable. With minor variations of degree almost all the units are subject to the same weaknesses and handicaps and it cannot be categorically said that a particular unit is strong and efficient and another one weak and inefficient. Even if such a classification could be made, there is no ground to suggest that any scheme of merger should be pursued, least of all to propose compulsory merger, since there is no provision in the law under which such a step can be taken even if it is assumed that it is necessary.

[Professor Merchant has expressed the opinion that in order to remove weaknesses and inefficiency in the automobile industry, the best solution would be the compulsory merger of weaker and inefficient units into stronger ones in the larger interests of the automobile industry as well as of the economy.]

- (10) Although the implementation of the recommendations made by the Tariff Commission after its two previous inquiries into this industry has not been adequate, rationalisation of the existing taxation structure, elimination of procedural complexities and delays and development of a good network of road system even now would go a long way in removing the present inhibitions and in increasing the domestic demand for commercial vehicles.

(iv)

- (11) When Government are approached in future for renewal of the existing collaboration agreements, they may think in terms of a reasonable time limit for the operation of the renewed or revised agreements, thus providing a spur to speedy assimilation of technical advance and improvements of product design with a view in particular to utilisation of indigenous materials and knowledge.
- (12) It may be worthwhile considering the possibility of making the payment of the dues of Indian firms to foreign principals and collaborators to the maximum extent in rupees. This is a point which may be further explored by Government and the Reserve Bank of India.
- (13) In view of the fact that not only has the vehicle production to be planned in the country over a number of units but also as foreign exchange for the import of components and raw materials as well as for the purchase of plant and machinery has to be allotted equitably to various units, it appears very necessary that the capacity should be technically assessed.
- (14) While issuing licences for expansion of capacity, care should be taken to see that the capacity is well balanced and is capable of economic production.
- (15) The issue of licences for import of raw materials should be related to both production and capacity, the ceiling being the licensed capacity of the unit concerned.
- (16) Government should specify the licensed capacities of each of the units in the automobile industry. Further the D.G.T.D. should undertake a technical assessment of the machinery installed in each unit and determine its installed capacity accurately.
- (17) D.G.T.D. should make an immediate assessment of the capacities of Hindustan Motors and Standard Motors for passenger cars and specify these in the

industrial licences as has been done in the case of Premier Automobiles.

- (18) The liberalised credit facilities referred to in paragraph 11 of the Report, it is expected, will help the development of the road transport industry.
- (19) It will be quite some time before the indigenous steel manufacturers have the capacity and capability to meet the requirements of the automobile manufacturers for rationalised varieties of steels and till then the requirements will have to be met from imports.
- (20) It is desirable to reduce progressively the overlapping of production as between the automobile manufacturers and the ancillary units. As the requirements of the automobile manufacturers of such items increase and their output decreases as a result of the depreciation of plant and machinery, it would be desirable to meet the balance of requirements from the ancillary manufacturers with a view to handing over all such production to the latter eventually. Also in future, care may be taken to ensure that no further expansion of capacity is allowed to automobile manufacturers for items for which capacity exists in the ancillary sector.
- (21) The method of calculating the indigenous content of different vehicles on the lines of the Jha Committee formula has a number of built-in limitations. The broad lines of an alternative and more practical method of calculating the progress in indigenous content of each vehicle are suggested in paragraph 14 of the Report. It is desirable now to shift the focus of attention from manufacturing progress *i.e.* indigenisation at the final stage of manufacture to the cost of the automobile industry to the country in terms of foreign exchange so that its gradual or faster reduction can be planned.
- (22) The Ministry of Industrial Development and Company Affairs may take steps towards coordination for the collection of data with regard to utilisation of foreign exchange allotted to industry through

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different departments and to maintain records in respect of different items including ancillaries in order that suitable measures may be taken for the reduction of the incidence of foreign exchange spent on the manufacture of automobiles.

- (23) The Directorate General of Supplies and Disposals should keep records of purchases of automobiles by Government both by number and value.
- (24) No conspicuous advance has been made in reversing the original vertical growth of the industry and even the official demarcation of parts to be manufactured by the main automobile manufacturers and the ancillary sector seems to have not met with the desired success.
- (25) In regard to standardisation of functional parts, the hindrance on account of foreign collaboration agreements is faced not only by vehicle manufacturers but also by ancillary manufacturers who have different collaboration agreements with different firms. Ways, therefore, need to be devised for overcoming the diversities in these matters resulting from foreign collaboration particularly when the functional properties are not likely to be affected adversely.
- (26) The work of standardisation has to continue with patience and perseverance both at the company level and national level with regard to certain materials and components that go into the automobiles and for materials and components that would be common to other engineering industries. The progress in this direction is likely to be faster if the manufacturing units are not tied down to specifications dictated by their foreign collaborators, where these can be safely modified. It is expected that where adequate initiative is present the collaborators would be agreeable to give their consent to such modifications which can be effected in the interest of standardisation, uniformity and indigenisation without detriment to quality.

(vii)

- (27) In the light of the factors mentioned in paragraphs 22.3 to 22.7, Premier Automobiles should not be allowed to implement its licence for the manufacture of engines. So also adding Simpson & Co., to the already existing number of truck manufacturers (by allowing it to manufacture a chassis to utilise its own engines) will not be economically justifiable.
- (28) Broad observations on certain general issues such as accidents and air pollution are given in Chapter IX.
- (29) In the case of ball bearings used by the automobile industry a considerable degree of import substitution can be achieved with minor modifications.
- (30) Owing to Government policies which restricted the production of passenger cars on the one hand but encouraged that of commercial vehicles the demand for passenger cars continued to accumulate and even now remains largely unsatisfied, the existing backlog of demand would need the full production of the country for a period of three years to satisfy. As against this huge backlog of demand for passenger cars, the supply of commercial vehicles is much easier and supplies can generally be made off the show-room floor.
- [Professor Merchant has expressed the view that the priority given to the production of commercial vehicles from the beginning should not only be continued but also be effectively enforced. A close check on the expansion of the installed capacity for passenger cars is also necessary so that the social objective of priority to commercial vehicles is not defeated.]
- (31) The impression that there is any attempt on the part of automobile manufacturers to continue to or take over the manufacture of what could be supplied by the indigenous ancillary industry or that there is an effort at vertical integration in the automobile industry is erroneous and based on inadequate appreciation of facts and data.

[Professor Merchant has expressed the view that no new units in the ancillary industry should be licensed at present till the existing efficient units become economically viable. Moreover, the tendency of vertical growth must be discouraged.]

- (32) The complaints received more recently by the Tariff Commission and by D.G.T.D. in 1965 in respect of the quality of cars are broadly in the ratio of cars manufactured by different manufacturers. While the sudden spurt of complaints lodged in 1966 with the D.G.T.D. against Hindustan Ambassador may perhaps indicate that users had relatively more complaints to make against this car than against others, it must also be noted that the production and therefore the number of users of this car are also very much more than those of other cars.
- (33) The agreements between the automobile manufacturers and their dealers are those privately entered into by the two parties and hence the terms etc. are better settled between themselves and are not within our purview. The manufacturers have been advised to look into the grievances of the dealers sympathetically to win their goodwill as they play an important role in the development of the automobile industry.
- (34) In regard to warranties, what is required is a determination of the minimum period of usage or mileage run during which defects could reasonably be expected to show up. The period of warranty should not be less than this minimum. If any manufacturer wishes to give a longer warranty period to win his customers' confidence he would be welcome to do so.
- (35) Where defects are admitted under warranty claims the labour charges should be borne by the manufacturers.
- (36) It would be preferable to place the production and inspection staff at an independent and equal level, both being co-ordinated to the extent necessary at

the point of top management, who it is needless to say must be themselves highly quality conscious if significant improvements are to be expected.

- (37) It is obvious that as far as standardisation of parts is concerned, it is only the manufacturers of automobiles who can take decisions in this matter, since it is a question of some adjustments or alterations.
- (38) A greater degree of collaboration between the various testing institutes in the country and the automobile industry as well as the automobile ancillary industry should be established for utilising the facilities available in the institutes.
- (39) It is desirable that automobile manufacturers should co-operate with ancillary manufacturers in establishing suitable testing facilities and that full use is also made of the existing facilities available in the various institutions.
- (40) It is hoped that the Automotive Research Association of India would soon start functioning actively. It would be in the interest of the development of the industry on sound and healthy lines, not only of manufacturers of automobiles but also of major ancillaries if they associate themselves with this organisation and derive full benefit from it.
- (41) It is for the automobile manufacturer to arrange settlement of claims with the ancillary manufacturers who supplied the components and the owner of the vehicle should not be made to deal with a number of agencies. He should be provided with redress by the manufacturer of his authorised dealer irrespective of the outcome of the claim which may subsequently be made by the manufacturer on the ancillary unit which supplied the original equipment.
- (42) In respect of the model changes of vehicles, it cannot be said that there are too many models or that there have been too frequent changes. The low volume of production stands undoubtedly in the way of the normal change in models.

[Professor Merchant has expressed the view that it is necessary to reduce the number of makes and models of vehicles to achieve economies of scale, to reduce the original cost, and to facilitate standardisation which could cut down the maintenance costs. He has, therefore, suggested that Government should emphasise utility and economy in the designs of vehicles and that there should not be more than one type in each category of the vehicles.]

- (43) Although the question of setting up more servicing stations and diversifying their locations would depend more upon business considerations than upon the need, it appears that there is considerable room for improvement of standards of servicing and repairs of automobiles.
- (44) Of late the ancillary industry has developed not so much with a view to fulfill the replacement demand as for supplying the needs of automobile manufacturers.

2. Government accept recommendations (1) and (2) above. They have decided that, after the withdrawal of the protective rates of duty, the effective rates of revenue duty should for the present be maintained at the same level as the effective rates of the existing protective duty. However, where in the manufacture of vehicles some manufacturers are using indigenously manufactured components while others are resorting to imports for one reason or the other, Government will consider subjecting such components to higher rates of import duty to make imported supplies costlier and thereby hasten the pace of indigenisation by those lagging behind.

Necessary legislation to implement the decisions of Government will be undertaken in Parliament in due course.

- 3. Government have noted recommendations (3) and (7).
- 4. Government accept recommendation (4).
- 5. Government accept recommendation (5). They further consider that the progress of the automobile industry

should be reviewed again by the Tariff Commission after a period of five years, that is, in 1973.

6. As regards recommendation (6), Government agree that periodical reviews are necessary in the case of all industries which are under protection, whether that protection has been granted by the levy of protective duties or in any other manner such as through import restrictions.

7. Regarding recommendation (8), Government agree with the view of Professor Merchant and consider that it should be open to them to license a new unit of economic size for the manufacture of passenger cars to enable the advantage of 'transfer line production and economies of scale to be availed of and to introduce an element of competition with its resultant benefits in the shape of better quality and cheaper prices.

8. Government agree with recommendation (9) of the Commission that any scheme for merger of the existing units is neither feasible nor desirable.

9. Government have taken note of recommendations (10), (14), (15), (17), (18), (20), and (22) to (28), and steps will be taken to implement them as far as possible. The attention of the State Governments is also invited to recommendation (10) in so far as they are concerned, and that of the manufacturers of automobiles and the manufacturers of automobile ancillaries to recommendations (24) to (28).

10. As regards recommendation (11), Government are of the view that requests of the automobile units for extension of collaboration agreements should be examined strictly on merits, taking into account the benefits that have already accrued by the collaboration and the leeway, if any, yet to be made up in acquiring the necessary know-how and skills.

11. Regarding recommendation (12), Government observe that payment in rupees would not by itself solve the problem, as any rupees in the hands of a foreigner would invariably give rise to a foreign exchange liability, either direct or indirect. They consider that it is more important to ensure that the overall liability is kept to the minimum.

12. Government agree with recommendations (13) and (16). In making a technical reassessment of the capacity of the existing units, it is proposed that the circumstances in which large increases in capacity, as claimed by some of the manufacturers, have been brought about and the sanctions behind them, should be carefully investigated before finally deciding on the revised installed capacities of the existing units.

13. Government have taken note of recommendation (19) and steps will be taken to implement it to the extent possible. Government will formulate a policy and procedure which, while aiming at import substitution, will not adversely affect production programmes of manufactures and will enable them to import such varieties of steel as are not available from indigenous resources in adequate quantities or of the requisite quality and specifications.

14. Recommendation (21) is still under the consideration of Government.

15. Government have noted recommendation (29). They will explore with Ball Bearing manufacturers the establishment of manufacture of the ball bearings needed by the Automobile Industry with a view to saving on imports. The attention of the automobile industry is also drawn to this recommendation.

16. As regards recommendation (30), Government have noted the views of the Commission as well as of Professor Merchant.

17. Regarding recommendation (31), it will be Government's endeavour to prevent further vertical growth as far as possible and to encourage horizontal development.

18. The attention of the manufacturers of the automobiles is invited to recommendations (32), (33), (35), to (41) and (43), that of the manufacturers of automobile ancillaries to recommendations (36), (38) to (41) and (44), and that of the Indian Institute of Science, Bangalore, the National Test House, Calcutta, and the National Metallurgical Laboratory, Jamshedpur, to recommendation (38).

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19. Regarding recommendation (34), Government have already, on the basis of the recommendations of the Motor Car Quality Enquiry Committee, issued statutory directions to the car manufacturers to give a uniform warranty of 12 months or 16,000 kms., whichever occurs earlier.

20. As regards recommendation (42), Government are of the view that the development of the Automobile Industry has now reached a stage where the manufacturer should have freedom to make model changes and produce different types of vehicles as dictated by the demand, subject to the important reservation that such diversification will not involve extra drain of foreign exchange by way of import of components, equipment or raw materials or purchase of additional technical know-how and documentation. A further relevant factor to be taken into account in such diversification programme is the need to keep the cost of production and the ultimate cost to the buyer at reasonable levels.



ORDERED that the Resolution be published in the *Gazette of India* and a copy thereof communicated to all concerned.

R. S. TALWAR,
Joint Secretary to the Government of India.

REPORT ON THE CONTINUANCE OF PROTECTION TO THE AUTOMOBILE INDUSTRY

CHAPTER I

INTRODUCTORY

1.1. The first inquiry into the automobile industry by the Tariff Commission was held in 1952 on a reference from Government. It related to the question of grant of protection (whether by grant of subsidies or levy of protective duties or any other suitable form) with a view to encouraging the development of the automobile industry in India on a sound basis. Subsequently, Government sought the advice of the Commission on certain specific points such as the manufacturing programme of the existing manufacturers, integration/co-ordination between assemblers and manufacturers, steps necessary for the growth of the automobile ancillary industry in India, future trend of imports of vehicles, accessories and raw materials as also on the rates of duty on imports of vehicles and components. In the Report submitted to Government in 1953, the Commission recommended that only such of those firms as had a phased programme for the progressive manufacture of complete vehicles in the country should be allowed to function and that pure assemblers who had no such programme be asked to terminate their operations as assemblers of vehicles. This recommendation was accepted by Government. Government also agreed with the Commission that for the quick development of the indigenous automobile industry, it was essential to encourage the greater use of vehicles by bringing down their prices and reduce the customs duty on several components so that the incidence on a complete C.K.D. pack did not exceed 40 per cent *ad valorem* on an average. Though the rates of duty on automobiles were not shown as protective in the Indian Customs Tariff Schedule, the automobile industry was accorded protection and the Commission was empowered to keep a watch over the industry and review the working of protection as in the case of other protected industries.

1.2. In spite of Government's efforts towards price reduction, no significant decrease in the net consumer price of automobiles was noticed and by 1955, Government had started receiving representations from automobile manufacturers seeking increases in the selling prices of vehicles on the ground that the manufacturing cost had been progressively rising due to reasons beyond their control. Government, on their part, had been allowing *ad hoc* increases in the prices of vehicles where they were satisfied that a *prima facie* case existed. By 1956, however, Government came to the conclusion that the issue was of sufficient importance to merit a detailed examination by the Tariff Commission, and accordingly, under Section 12(d) of the Tariff Commission Act, 1951, the Commission was requested to conduct necessary inquiry and submit its recommendations on the fair ex-works prices and selling prices of various types of motor vehicles manufactured in the country as well as a formula for revision of prices from time to time as and when components began to be manufactured in the country in accordance with the approved manufacturing programmes of several units. The Commission was also asked to pay special attention to the extent and the manner in which the obligations of the several units under their approved manufacturing programmes had been discharged; the further steps that would be necessary to implement them fully; and the difficulties, if any, in the way of the full discharge of such obligations in the future and how they should be removed. Consequently, the Commission also undertook along with the price inquiry the review of the protection granted to the automobile industry. The ancillary industry was however excluded from the scope of the inquiry. The Commission submitted its Report to Government in October 1956 in which it observed that the interests of consumers could be adequately safeguarded by replacing the then existing system of price control by a more flexible system under which no maximum prices were fixed, but, subject to a general obligation not to charge excessive prices, the manufacturers were left free to vary prices at their discretion and periodic investigations were held into their costs and profits to ensure that the obligation was actually fulfilled by them. This was accepted by Government in the Ministry of Heavy Industries

Resolution No. 21(4)TB/56, dated 23rd January, 1957, with certain conditions which resulted in what is known as 'informal price control' on automobiles. Government also accepted the Commission's recommendation that the industry should be granted protection for a period of ten years ending 31st December 1967, subject to periodical reviews into the rates of protective duties. As regards the rates of duty, however, Government accepted the Commission's recommendations with some minor modifications only.

1.3. The Commission made a specific recommendation with regard to the margin of profit to automobile dealers. On this issue, Government came to the conclusion that it should be fixed at 10 per cent of the ex-factory prices for passenger cars and jeeps and $7\frac{1}{2}$ per cent of ex-factory prices for trucks, buses and other commercial vehicles, as recommended by the Commission, but did not agree with the Commission to fix a monetary ceiling of Rs. 1,000 per vehicle.

1.4. Other ancillary recommendations made by the Commission were accepted by Government. Details of these recommendations together with an appraisal of their implementation are given in paragraph 4.

1.5. The mid-term review of the industry was not considered necessary in view of the fact that detailed reviews of the indigenous automobile industry were made by an *Ad Hoc* Committee, on the Automobile Industry, known as the Jha Committee, and by certain experts deputed by Ford Foundation and also by the International Bank for Reconstruction and Development.

2.1. Protection granted to the automobile industry was due to expire on 31st December, 1967. Since it was not likely that the Report would be available to Government for being placed before Parliament in time to enable the latter to take decisions on the same we made a request to Government that protection to the automobile industry as well as to the relevant items referred to in paragraph 2.5 below may be extended for a period of one year. Government

2. Present inquiry and its scope

accepted the recommendation and extended the period of protection upto 31st December 1968. We have undertaken the present inquiry under Section 11(e) read with Section 13 of the Tariff Commission Act under which we are empowered to inquire into the working of protection granted to an industry and recommend further action to be taken with a view to its increase, decrease, modification or abolition according to the circumstances of the case.

2.2. The Commission in its Report on the Continuance of Protection to the Diesel Fuel Injection Equipment Industry (1963) had recommended that protection should be continued to multi-cylinder pumps and that further continuance of protection to this sector should be examined along with the inquiry into the continuance of protection to the automobile industry beyond 31st December, 1967. This recommendation was accepted by Government.

2.3. The measure of protection granted to the automobile industry on the Report of the Tariff Commission covered complete automobiles as well as a large number of components of which the specific ones are listed in Appendix I. While no protective rates of duties were shown in the Indian Customs Tariff Schedule against fully assembled automobiles the rest of the items attracted protective rates of duties varying from 50 per cent to 60 per cent *ad valorem*. At the time of the Commission's last inquiry, the position was that about 62 items of this list were not being produced in India while item Nos. 2 to 7, 9, 10, 14, 19, 21, 23, 25 to 28, 49, 50, 52, 53, 57, 61 (in all 22 items) were being produced by the automobile industry; item Nos. 11, 30, 39, 48 (in all four) were being produced by the automobile ancillary units. As a result of the inclusion of these items under protective rates of duty, protection was extended to the industry producing these components and sub-assemblies. During subsequent years from 1956 to 1966 indigenous production capacity for a large number of items which were not being produced earlier was set up. The position at the start of this inquiry therefore was, that of the 88 specified items of components liable to protective rates of duty 31 components were being manufactured both by the automobile as well as the automo-

bile ancillary industry, ten components were being manufactured only by the automobile industry and 47 only by the automobile ancillary industry. Details of the units manufacturing the relevant items in the ancillary sector are given in Appendix II.

2.4. While we were about to initiate the inquiry into the continuance of protection to the automobile industry, we received a communication from the Government of India, Ministry of Commerce dated 31st May, 1966 (*vide* Appendix III) containing the following terms of reference :—

- (i) No systematic study of the production costs of the automobile industry has been made so far for the purpose of determining the fair selling prices of automobiles, although the automobile units had been subject to cost examination by the Cost Accounts Branch of the Ministry of Finance on certain occasions in the past. Government therefore felt that it would be advantageous if the Tariff Commission would, as a part of its protection inquiry into the automobile industry, also inquire into the cost structure and fair selling prices of different types of automobiles at present under production in the country. Accordingly, they asked the Commission to conduct an inquiry under Section 12(d) of the Tariff Commission Act and forward its recommendations.
- (ii) The profit margin for dealers of commercial vehicles and cars was fixed at $7\frac{1}{2}$ per cent and 10 per cent respectively on the basis of the Commission's last Report. Since then, while increases in prices of these vehicles were approved by Government from time to time, profit margins of the dealers were pegged at the levels originally fixed by Government. Representations were made by dealers to the effect that profit margins available to them were inadequate in view of the steadily rising cost and should be suitably increased. The Commission was requested to inquire into this question also and forward its recommendation.
- (iii) Complaints were made to Government that while rigid control was exercised on the prices of main

automobile producers, no such control was imposed on the automobile ancillary industries. It was also represented that the prices charged by the ancillary manufacturers for their products for use as original equipment were exorbitant. The cost examination undertaken by the Ministry of Finance in 1965 into some of the important ancillary manufacturing units had corroborated the allegation that the selling prices of some of the units were on the high side. Government, therefore, considered it desirable that simultaneously with the inquiry into the prices of automobiles, the Commission should undertake an inquiry into the cost structure of some of the major ancillary industries with a view to determining their selling prices. A reference was, therefore, made to the Commission for inquiry and report under Section 12(d) of the Tariff Commission Act. The selection of the ancillaries was however left to the Commission's discretion having regard to their contribution to the economics of production of vehicles by the main manufacturers.

2.5. We decided to hold a separate public inquiry into the price structure of ancillary industries and submit another Report which also deals comprehensively with the capacity, production, demand, raw materials, quality, standards, exports and other allied matters relating to the ancillary industry. The scope of the present inquiry is, therefore, limited to the following main issues :—

- (i) The question of continuance of protection to the automobile industry covered by ICT item Nos. 75, 75(1), 75(3), automobile ancillaries covered under 75(9), 75(10), 75(11), 75(12) and 75(14) and multi-cylinder pumps covered by ICT item No. 75(11).
- (ii) Fixation of fair selling prices of different kinds of vehicles manufactured in the country. Under this, we are covering passenger cars (including station wagons), delivery vans, jeeps, trucks (petrol and diesel), buses and 3-wheelers manufactured by Bajaj Tempo Ltd. Other kinds of automobiles

have been excluded from the scope of our current inquiry. Although the price control on jeeps and commercial vehicles has been recently lifted, Government have held the view that we should examine the costs of production and determine the fair selling prices of all categories of automobiles.

(iii) Profit margin admissible to automobile dealers.

2.6. We are submitting two separate Reports on the automobile industry—one on the Continuance of Protection to the Automobile industry including multi-cylinder pumps beyond 31st December, 1968 and the other on the fair selling prices of automobiles manufactured in the country. This Report relates to the protection aspect while the question of prices is dealt with in another Report.

2.7. The ancillary industries had been excluded from the scope of the inquiry conducted in 1956. Separate inquiries had earlier been conducted into some of the ancillary industries such as, Leaf Springs (1954), Spark Plugs (1955), Hand Operated Tyre Inflators (1955), Piston Assembly (1956) and Fuel Injection Pumps (1956) which resulted in their protection in the years mentioned against each. Yet another item of ancillary industry, Batteries for motor vehicles, had been granted protection in 1949 by the Interim Tariff Board and this protection continued until 1956 when the industry was deprotected. In subsequent years Leaf Springs (1960), Hand Operated Tyre Inflators (1961), Fuel Injection Pumps excluding multi-cylinder pump for diesel engines (1964), Spark Plugs (1966) and Piston Assembly (1967) were deprotected in the years mentioned in parenthesis after each item. Of the ancillary components and sub-assemblies for which separate inquiries were held only multi-cylinder pumps continue to enjoy protection. As a result of the recommendations made in 1956 more than 90 other items mentioned in Appendix I were accorded protective rates of duty. Most of these items as has already been stated in paragraph 2.3 are now being manufactured by automobile ancillary manufacturers. As has been mentioned already the period of protection for these industries has been extended upto December 1968 and this Report also covers the question of the extension of protection to these industries.

3.1. Questionnaires were issued to producers of automobiles, automobile dealers and fleet-owners, including public transport undertakings. Two press notes were issued in September 1966 and February 1967 respectively, inviting firms, associations and others interested in the inquiry to obtain copies of the questionnaire and submit their replies. The Association of Indian Automobile Manufacturers, All India Automobile and Ancillary Industries' Association and the Automotive Engineers' Society were asked to submit memoranda on the various aspects of the inquiry. Memoranda were also invited from dealers' associations, consumers' associations and the fleet-owners' associations spread over the different parts of the country. A special questionnaire for users of passenger cars was circulated to individual consumers through the Chief Secretaries of State Governments, the automobile associations and the Taximen's associations in certain important States. Manufacturers of special types of alloy steel required by the automobile industry were asked to furnish information on certain specific points. Information regarding petrol pumps and service facilities available with them was sought from the oil companies.

3.2. A comprehensive memorandum on the progress made by the automobile industry since the last inquiry, its present position and other matters was called for from the Automobile Directorate of the Directorate General of Technical Development (D.G.T.D.). Information on issues pertaining to them was sought from the Ministry of Industry (now Ministry of Industrial Development and Company Affairs), the Ministry of Transport, Chief Controller of Imports and Exports and the Director General of Supplies and Disposals (D.G.S. & D.). A letter was issued to the Controller of Cars and Commercial Vehicles asking for information on the policy of distribution and controls on automobiles. The Indian Standards Institution (I.S.I.) was requested to submit a memorandum with regard to efforts made by it towards rationalisation and import substitution in automobile industry. Details about the availability of testing facilities for automobiles and ancillaries, import substitution etc. were sought from research institutions like the Central Mechanical Engineering Research Institute, Durgapur, National Metallurgical Laboratory, Jamshedpur.

National Test House, Alipore and the Indian Institute of Science, Bangalore. The Collectors of Customs were addressed for data regarding the c.i.f. prices and the landed costs of latest imports of automobiles and ancillaries into the country. The State Trading Corporation of India (S.T.C.) was asked to furnish data regarding imports of cars and the policy for their disposal. The Reserve Bank of India was requested to apprise the Commission of its recent policies regarding credit facilities to automobile fleet owners and foreign exchange released to the automobile industry. The Indian Banks' Association was requested to submit a note on the hire-purchase system in so far as it related to commercial vehicles and on certain allied matters. We issued letters to the Municipal and Police authorities seeking information with regard to motor accidents. The State Governments were approached for views on the question of continuance of protection to the industry and on difficulties brought to the notice of the Commission in respect of inter-State transport and taxation. Inquiries were made from the Government of India Trade Representatives abroad about the latest f.o.b. prices of automobiles comparable to those produced in India and on other specific issues. A list of those to whom questionnaires or letters were issued and from whom replies or memoranda were received is given in Appendix IV.

3.3. Details of the visits to the automobile units by us and our officers in connection with the present inquiry are given in Appendix V. All the units have been costed by our Cost Accounts Officers.

3.4. We desired to have the assistance of a foreign automobile expert as was done at the two previous inquiries of the Commission, but the Government of India were in a position to offer the services of an expert only by October, 1967 by which time a major part of the inquiry was completed. We could not therefore avail of the Government's offer.

3.5. We held separate discussions with passenger car users on 4th October 1967 and with dealers on 5th October 1967. A public inquiry into the industry was held on 6th and 7th October 1967. This was followed by discussions on costs of manufacture with representatives of the costed

units from 9th to 17th October 1967. A list of persons who attended the discussions and the public inquiry is given in Appendix VI.

4.1. The important conclusions and recommendations made by the Commission in its last Report (1956) on matters other than tariff and the extent to which the recommendations have been implemented by the interests concerned in the last report are given in the following paragraphs :—

4.2. Recommendation :

“The number of additional commercial vehicles required for the effective implementation of the Second Five Year Plan is estimated to be much higher than is indicated by the above estimate of demand, but in order that a substantially higher demand for such vehicles may actually develop, certain positive measures have to be taken to encourage road transport. In particular, the attention of the State Governments should be drawn to the fact that the necessary expansion in road transport capacity will not take place unless they co-operate in removing the various factors which are today hampering the demand for commercial vehicles, in particular, the following:—

- (i) Inadequate road development and bad conditions of roads;
- (ii) heavy and varying rates of taxation of commercial vehicles; and
- (iii) restrictions on inter-State movement of commercial vehicles.”

[Paragraph 24.5.]

4.2.1. While agreeing generally with the Commission's views regarding the growth of demand, Government expressed the hope in the Resolution issued on the Commission's Report that with the amendment of the Motor Vehicles Act, 1939 and the co-operation of the State Governments the automobile industry would play an increasingly important role in the transport system of the country.

4.2.2. One of the manufacturers has stated that the above recommendations have not only not been implemented but heavier burden of taxes and duties, the rigid pricing policy and unimaginative restrictive rules and procedures for inter-State transport have all served as further impediments in the way of the growth and development of the automobile industry and road transport. The other manufacturers have also strongly represented that Government have not paid much attention to the factors which hamper demand for commercial vehicles. These issues are discussed further in paragraph 10.

4.3. Recommendation :

“The Reserve Bank of India, in consultation with the commercial banks, should evolve a suitable scheme for extending credit facilities to transport operators for purchase of vehicles.”

[Paragraph 24.6.]

4.3.1. We have been informed by the erstwhile Ministry of Industry that the State Bank of India Act was amended to make advances to undertakings engaged in hire-purchase business against the original security of hypothecation of vehicles and book debts. The Reserve Bank of India is also reported to have been entertaining proposals under the Bill Market Scheme for sanction of limits in respect of bills arising out of the eligible bank advances to the road transport industry and to purchasers of commercial vehicles on hire-purchase basis. Explaining their policy, the representative of the Reserve Bank stated during the public inquiry that commercial banks have been asked to give priority to hire-purchase companies as also the vehicle manufacturers with a view to helping the road transport industry.

4.3.2. Two of the automobile manufacturers and some of the fleet owners have, however, represented to us that the vehicle operators are faced with hardships and that credit facilities are restricted. This aspect is further discussed in paragraph 11.

4.4. Recommendation :

“Since from the point of view of foreign exchange and fuel economy, diesel operation of medium and

heavy commercial vehicles is distinctly more economical and, therefore, deserves to be promoted in the larger interests of the country,no taxation or other measures should be adopted which are likely to discourage the current trend towards dieselisation of such vehicles."

[Paragraph 24.7.]

4.4.1. In their Resolution on the Commission's Report Government stated that they have noted the above views. We have now been informed by the Ministry of Industrial Development that the replacement of petrol vehicles by diesel ones was proceeding so rapidly that, it was felt no additional efforts were required to accelerate it.

4.4.2. Two of the manufacturers have stated that inspite of the above recommendation a series of taxes has been imposed on diesel oil making the cost of the fuel unduly high. The incidence of duties and taxes on diesel oil is stated to have increased from Re. 0.26 to Rs. 2.89 per five litres during the ten year period from 1956 to 1965.

4.5. Recommendation :

"A fresh examination should be undertaken by all State Governments to see how far the restrictions on permissible laden weight can be relaxed and the use of trailers with goods vehicles allowed."

[Paragraph 24.8.]

4.5.1. We have been informed by the former Ministry of Transport and Aviation that the State Governments were advised in 1958 that registered laden weight of 25% above the certified gross vehicle weight would be justified in the case of vehicles marketed from 1953 onwards, while the registered laden weight of vehicles marketed upto 1952 might be fixed at 12½% over and above the certified gross vehicle weight. Most of the State Governments are stated to have issued the necessary notifications in this regard. Further, the question of laying down uniform laden weight standards on the main trunk routes was under the consideration of the Inter-State Transport Commission set up under Section 63-A of the Motor Vehicles Act, 1939. As a first

step, the Delhi-Bombay route was selected for this exercise. We are also informed that the State Governments have been requested to permit the use of truck-trailer and tractor-trailer combinations on all the highways to the extent possible. In congested places, where the use of these combinations may not be safe during the day time, the State Governments have been requested to permit their use at night. For facilitating the operation of such combinations, the State Governments have been requested to improve the conditions of roads, strengthen weak bridges and culverts, etc.

4.5.2. One of the manufacturers has stated that the use of trailer is a normal form of transport in America and Germany, while in India the progress in this direction has been negligible. The D.G.T.D. has however informed us that there are at present 12 units in the country which are licensed to manufacture trailers, with a total annual capacity of about 9,000. A statement showing the names of these units along with their individual licensed capacity and production since 1962 to 1966 is given in Appendix VII. During the year 1967 two units namely, Kolhapur Auto Works, Kolhapur and Bajrangbali Engineering Co. Private Ltd., Howrah were registered with the D.G.T.D. for the manufacture of trailers. The latter's licence was for the manufacture of trailers with a capacity of over 15 tonnes. A third firm namely, Anand Automobiles Ltd., Bombay to which a letter of intent has been issued for the manufacture of 1,000 trailers as early as 1964 is reported to have made no progress and we understand that Government are considering further necessary action to be taken with regard to this unit.

4.6. Recommendation :

"The estimate of demand given above on the basis of the present assessment of possibilities should be adopted for the purpose of planning the capacity of the domestic industry and steps should be taken later to meet any increase in demand above the estimate, as and when it develops."

[Paragraph 24.9.]

We are informed that Government accepted this recommendation. In the Third Plan, the targets of capacity for the final year were fixed at 60,000 commercial vehicles, 30,000 cars and 10,000 jeep vehicles. The Fourth Plan targets have not yet been finalised.

4.7. Recommendation :

“There has been gradual improvement in the quality of automobiles assembled in India since 1954. Hindustan Motors however should tighten up inspection in their machining and assembling shops, arrange for more careful scrutiny of the purchased components and take further steps to improve the quality of their castings.”

[Paragraph 24.12.]

Government brought this to the notice of Hindustan Motors Ltd. for compliance.

4.8. Recommendation :

“The manufacturers should undertake full responsibility for all the parts fitted to their vehicles, without making any distinction, for the purpose of their warranties, between the parts manufactured by them and those purchased by them from other sources.”

[Paragraph 24.13.]

The recommendation has been brought to the notice of all the automobile manufacturers from time to time by Government. This is further discussed in paragraph 19.

4.9. Recommendation :

“The manufacturers should take early steps to establish an association on the lines indicated in paragraphs 16.9 and 16.10 with the special object of ensuring the maintenance of proper quality standards and making improved arrangements for the settlement of all disputes concerning quality.”

[Paragraph 24.14.]

We have been informed that an association of Indian Automobile Manufacturers was formed in 1958 to safeguard the interests of the industry but not much progress was made by it in the maintenance of proper quality and making improved arrangements for the settlement of disputes concerning quality. With the assistance of this Association and five automobile manufacturers, one engine manufacturer, and two automobile ancillary manufacturers, a Research Association known as Automotive Research Association of India was registered in Bombay in December 1966, i.e., eight years after the formation of the Manufacturers' Association, on the lines indicated by the Commission. This is discussed further in paragraph 17.

4.10. Recommendation :

"Certain general principles to be observed in regulating the future development of the industry have been suggested in paragraphs 17.1 to 17.12."

[Paragraph 24.15.]

These have been set out as follows based on the extracts from the relevant paragraphs.

4.11. Recommendation :

"Achievements of the automobile industry in this country should primarily be judged by its progress towards establishing the manufacture of commercial vehicles..... It would not be desirable at this stage to sanction any new project involving heavy capital expenditure for the manufacture of passenger cars.

[Paragraphs 24.15 and 17.2.]

We are informed that no new project or expansion for the manufacture of passenger cars has been sanctioned by Government since 1956. However, the total installed capacity of the car manufacturing units as adopted by us after discussion is 38,000 numbers per annum at present as against 20,200 assessed by the Jha Committee in 1960. Besides the capacity for jeeps has increased from 2,500 to 12,000 for jeeps and jeep type vehicles. The progress towards establishing the manufacture of commercial vehicles

has been striking. The total capacity which was about 15,000 vehicles in 1956, has now jumped more than three times to 51,300 vehicles including light commercial vehicles.

4.12. Recommendation :

“Among commercial vehicles, the manufacture of diesel vehicles obviously needs greater attention because of the rapidly increasing demand for such vehicles..... Premier Automobiles have made relatively greater progress in the manufacture of petrol engines and although their present capacity is only 3,000 engines a year, they would probably find it necessary in course of time, to expand this capacity further to achieve economic production. The capacity of this firm therefore should be adequate for such demand for petrol engines as exists today or may be reasonably expected in the near future. We therefore consider that it would be advisable to relieve Hindustan Motors of their obligation to implement their manufacturing programme with respect to the Studebaker engines. This however, should not affect their right to continue as approved manufacturers of trucks.”

[Paragraphs 24.15 and 17.3.]

According to the data furnished to us, the manufacture of diesel vehicles has increased from about 13,000 in 1957 to nearly 29,000 in 1966. Manufacture of Studebaker (Petrol) engines had been discontinued by Hindustan Motors since 1957-58. Mahindra & Mahindra, however, is of view that the trend has been to encourage petrol driven in preference to diesel vehicles for the reason that with the establishment of oil refineries in the country there is over-production of petrol and short supply of diesel oil. We are informed on the other hand that the production of diesel oil has increased almost four times and that some quantities are being exported now.

4.13. Recommendation :

“Public opinion in India would like to see the manufacture of a baby car established in the country in preference to light, medium or big cars.

the Reserve Bank's role was only to assist the banks whenever they were in need for accommodation, it had not considered it necessary to give any directions to the banks with regard to granting advances to any particular sector such as transport undertakings as these were all matters to be decided on normal banking practices. In connection with the current inquiry, we have been informed that Reserve Bank of India has now advised banks that requests for credit facilities from hire-purchase companies for financing sales of commercial vehicles should not be treated as of lower priority than those of manufacturing industries provided these are found satisfactory according to usual banking criteria. We have been further informed that finances are obtainable by the vehicle operators in any of the following manner:—

- (i) Directly from banks against hypothecation of vehicles;
- (ii) Advance by banks to hire-purchase companies/financiers against the hypothecation of book-debts arising from hire-purchase transactions, etc.;
- (iii) Facilities in the form of sales on credit on hire-purchase or instalment basis extended to operators by automobile manufacturers/financing agencies.

Very recently, we have been informed by the Industrial Development Bank of India that a separate scheme for extending re-discounting facilities, under Section 9(1) (b) of the Industrial Development Bank Act, 1964 to the transport industry has been formulated. Under the scheme re-discounting facility is extended only to promissory notes arising out of hire-purchase sales or conditional sales and resales of motor vehicles to road transport operators by manufacturers of motor vehicles or approved hire-purchase finance companies for the present. There are at present nine hire-purchase companies for this purpose of which we understand, two are subsidiaries started by two vehicle manufacturers. These facilities are available only to commercial banks and State co-operative banks approved from time to time. The number of such institutions approved at present is 68. A transport operator for this purpose may be a public or private limited company, a co-operative society, a partnership firm or even a sole proprietor. The period of deferred payment should

not be less than six months or more than 36 months subject to Reserve Bank's directives, if any. Under the scheme, the approved banks are given re-discounting facilities by the Industrial Development Bank which will re-discount the promissory note at a rate of six per cent per annum provided the banks do not charge by way of discount more than nine per cent per annum to the manufacturing or hire-purchase finance company. The latter are not expected to charge interest to the road transport operators at a rate of more than seven and a half per cent flat per annum. The vehicles in respect of which this facility is open are new trucks and jeeps irrespective of the tonnage per vehicle and passenger buses plying for hire. The scheme being intended for assisting road transport operators in the private sector, no facilities under this are available to persons who are not such operators or to Government or quasi-Government bodies. The minimum amount of transactions covering a set of promissory notes representing deferred payment will be Rs. 10,000, while arrangements involving re-discounting of promissory notes for more than Rs. 10 lakhs in respect of a single transport operator, over a year, will require prior clearance with the Industrial Development Bank.

11.2. We understand that a non-official Hire Purchase Bill based on the suggestions contained in the 20th report of the Law Commission of India was introduced in Lok Sabha in June 1967. We expect that these liberalised credit facilities will help the development of the road transport industry.

11.3. At present the question of providing financial assistance to road transport operators is under examination by a Study Group referred to already by us in paragraph 10.4.8 of this Report. We expect that these liberalised credit facilities will help the development of the road transport industry.



should be planned on the largest possible scale in a few units. We, therefore, see no merit in restricting the expansion of production of Perkins or Meadows engines (the two engines already approved) and sanctioning the installation of capacity for manufacturing new types of diesel engines in Hindustan Motors or Premier Automobiles. The manufacture of automobiles, as distinct from their assembly, is recognised to be a risky and costly venture and multiplication of units does not help to minimise either the risk or the cost of this venture."

[Paragraphs 24.15 & 17.7.]

Since the last inquiry licence for the manufacture of 15,000 diesel engines annually was given to Hindustan Motors in 1963 and it is understood that it has already set up the necessary capacity. Similarly Premier Automobiles was licensed in 1963 to produce 15,000 diesel engines annually, but the capacity has not so far been set up.

4.17. Recommendation :

"In any case priority should be given to expansion of the existing units over establishment of new units, even though this may mean slower development. This will also be fair to the existing units since none of them have had so much prosperity that it needs to be shared with new units".

[Paragraphs 24.15 & 17.8.]

Since the last inquiry, the only new unit in the private sector which has entered the field is Bajaj-Tempo which was originally licensed in 1959 to manufacture 1000 3-wheeler commercial vehicles and has since been licensed to increase the capacity to 4,000 Nos. including the production of 4-wheelers. In the public sector, the Ministry of Defence sanctioned a project for the manufacture of two types of vehicles in its Ordnance factories.

4.18. Recommendation :

"It will place this (automobile) industry on a sounder footing if investment were directed to setting up common production facilities for forgings,

castings and certain items like the rear axles and chassis members, than to establishing manufacturing units for new models. The establishment of common production facilities for the purposes mentioned above will lighten the financial burden of individual manufacturers, avoid duplication of capacity and make for lower cost. This, of course, presupposes willingness on the part of the various units to collaborate with each other. Hitherto, the manufacturers in India have shown little inclination in this direction and much duplication of capacity has already taken place..... We feel that in future, manufacturers should be encouraged to explore the possibilities of mutual collaboration to the fullest extent and no avoidable duplication of facilities should be permitted merely on the ground of enabling a manufacturer to have effective control over his cost and quality".

[Paragraphs 24.15 & 17.9.]

4.19. Recommendation :

"While the setting up of common production facilities will help considerably to keep down costs, it should not be assumed that this would permit the introduction of new models without adverse repercussions on cost..... Consequently, even when common production arrangements are made for any components, it is necessary to keep the number of types produced to the minimum in order to minimise the incidence of capital charges".

[Paragraphs 24.15 & 17.10.]

No facilities for production of common items have been set up by the automobile manufacturers. One of the producers, in this connection, has stated that though attempts were made, it was not possible for the automobile manufacturers to come to any agreement for establishment of common production facilities.

4.20. Recommendation :

“..... The task assigned to each manufacturer should be kept within manageable limits, and while considering each application for a new project, due consideration should be given to any arrears which the applicant may have on his existing projects”.

[Paragraphs 24.15 & 17.12.]

The then Ministry of Commerce and Industry intimated to the Commission as early as 1958 that the general principle enunciated by the Commission had been noted.

4.21. Recommendation :

“The position regarding the future supply of diesel engines should be kept under constant review and if the domestic production of these engines cannot be stepped up in the immediate future, measures should be taken temporarily to obtain additional imports of built-up engines to avoid scarcity.”

[Paragraphs 24.16 & 17.11.]

The then Ministry of Industry has informed us that the supply of diesel engines to vehicle manufacturers is reviewed from time to time and imports allowed, if considered necessary. The D. G. T. D. has stated that Hindustan Motors Ltd. was permitted to import 1,000 Bedford petrol engines from U. K. and 1,500 Chevrolet Petrol engines from U.S.A. (worth Rs. 55.65 lakhs) during 1965-66 because a number of Government and semi-Government bodies needed petrol vehicles and the only petrol engine manufacturer was unable to meet the demand owing to prior order for defence requirements.

4.22. Recommendation :

“The following observations have been made in regard to the existing manufacturing programmes and the manner of their implementation :

[Paragraph 24.17.]

- (i) "Since a firm cannot be said to be manufacturing a vehicle unless and until it has begun to produce the engine, transmission, rear axle, suspension, and chassis members, the approved manufacturers should endeavour to advance such of those assemblies as have been assigned to a late phase in their manufacturing programme to an earlier phase".

[Paragraph 24.17 (i).]

4.22.1. The erstwhile Ministry of Industry had informed us that the manufacturing programmes of the automobile manufacturers have more or less been fulfilled and that most of them have already attained an indigenous content of 90 % or above.

- (ii) "Each approved manufacturing programme should impose a definite obligation on the manufacturer to start production from indigenous materials within a specified time limit".

[Paragraph 24.17 (ii).]

4.22.2. The then Ministry of Industry had started that this was borne in mind while approving manufacturing programmes. However, one of the manufacturers has informed us that imposition of obligation was not possible because production of raw materials (e.g. steel) was not within the control of the automobile manufacturers. But no plan has so far been framed for the substitution of imported raw material used for automobiles by indigenous material. As much as 85 per cent of the weight of a passenger car is made up of iron and steel of which 70 per cent is steel and almost the whole of this is still imported. So is the case in the other raw materials too. The only significant indigenous supply available is that of iron for castings, and in some cases even this is imported as raw materials and semi-finished castings.

- (iii) "A firm's manufacturing progress should not be assessed merely from the assemblies deleted by it from the c. k. d. pack, but due account should be taken of what the firm continues to import for the 'production' of the assemblies concerned in spite of their deletion".

[Paragraph 24.17 (iii).]

4.22.3. The former Ministry of Industry had reported that at a meeting with manufacturers it was emphasised that in the grant of import licences, the merits of every scheme would be judged not merely by the apparent production in finished components, but also by the extent to which, in doing so, the firm was asking for rough semi-finished components to be imported. We have dealt with this matter further in paragraph 14.

- (iv) "A manufacturer should not be deemed to have fulfilled his obligation with respect to the manufacture of a component until his production of that component is sufficient for the number of vehicles assembled by him. The manufacturers should be required to inform Government of the capacity proposed to be installed by them for the components on their manufacturing programme and to give satisfactory reasons for any marked difference between the proposed capacity and their requirements".

[Paragraph 24.17 (iv).]

- (v) "In order to avoid an excessive increase in the cost of vehicles, it is essential to have a suitably phased manufacturing programme for the industry as a whole as for individual units. Since there is at present no co-ordination between the programmes of individual units and each has been phased differently, it is possible that at some stage, taking all of them together, too many components may be found to be included in the same phase. The situation is further complicated by the various ancillary projects outside the manufacturing programmes of the major producers. Government should avoid giving approval to too many ancillary projects simultaneously or to risky and costly ventures like the manufacture of body panels for passenger cars".

[Paragraph 24.17 (v).]

4.22.4. The erstwhile Ministry of Industry had informed us that no action on the recommendations was considered necessary as adequate provision already existed under

the Industries (Development & Regulation) Act, 1951 for the regulation of the industry on sound basis. The preparation of uniform phased manufacturing programme for the industry as a whole was also not considered technically feasible.

- (vi) "The considerations mentioned in Paragraph 17.17 of the Report should be borne in mind whenever there are opportunities for revising the existing agreements between the approved manufacturers and their foreign associates".

[Paragraph 24.17 (vi).]

4.22.5. We are informed that this is borne in mind by Government while considering the question of approval/renewal of foreign collaboration agreements.

- (vii) The manufacture of Commer 3 to 5 ton commercial trainee shop, similar to the one at the TELCO works, for training the workers before they are admitted to the factory. The trainee shops should be in charge of competent technical personnel and should be liberally financed by the manufacturers".

[Paragraph 24.17 (vii).]

4.22.6. This recommendation had been brought to the notice of the manufacturers. This is dealt with further in Paragraph 17.

- (viii) "Each manufacturing unit should develop its own facilities for designing of jigs and tools".

[Paragraph 24.17 (viii).]

4.22.7. Government brought this recommendation to the notice of the industry. In January, 1958, the erstwhile Ministry of Commerce and Industry informed the Commission that in view of the fact that every unit had started manufacturing different components of an automobile, it was more concerned, at that state of development, with tackling problems of day-to-day production. The question of developing designing facilities appeared, therefore, to be one of difficult achievements at that moment. The progress made since then has been further discussed in paragraph 17.12.

4.23. Recommendation :

"In the light of the principles referred to elsewhere in the Report, the Commission does not support the following proposals :—

- (i) The manufacture of 4-wheel-drive Land Rover cars by Hindustan Motors.
- (ii) The manufacture of automobile diesel engines by Hindustan Motors and Premier Automobiles.
- (iii) The manufacture of Fiat-600 cars by Premier Automobiles.
- (iv) The manufacture of O. M. 636 Mercedes-Benz diesel engine and related vehicles by TELCO.
- (v) The manufacture of 112" wheel base chassis by Standard Motor Products.
- (vi) The manufacture of B. M. W. Motocoupe 'Isetta' cars sponsored by the Saurashtra Government.
- (vii) The manufacture of Commer 3 to 5 ton commercial vehicles by the Automobile Products of India".

[Paragraph 24.18.]

The then Ministry of Industry has informed us that except the proposal at (ii), the other proposals had not been approved.

4.24. Recommendation :

"The permission granted to Hindustan Motors to manufacture Baby Hindustan cars should not be withdrawn. This recommendation is independent of the desirability and timing of introducing a common engine for both Landmaster and Baby Hindustan. On this question, a technical examination is required which the Commission has not been able to carry out to ascertain whether Hindustan Motors can avoid or postpone the introduction of the new engine after it has been adopted by their associates in the United Kingdom".

“The Commission sees no objection to the proposal of Hindustan Motors to take up the manufacture of two-wheel drive version of Land Rover, provided no technical difficulties are involved”.

[Paragraph 24.18.]

The former Ministry of Industry had informed us that the permission had not been withdrawn but the manufacture of Baby Hindustan car was discontinued under instructions from Government to the car manufacturers that with a view to conserving foreign exchange, they should undertake manufacture of only one make of car each, which needed less foreign exchange.

4.25. Recommendation :

“The maximum ‘mark up’ on the ex-factory price to cover dealers’ commission should be Rs. 1,000 per vehicle, or 10 per cent of the ex-factory price, whichever is less, for passenger cars and jeeps and Rs. 1,000 per vehicle of $7\frac{1}{2}$ per cent of the ex-factory price, whichever is less, for trucks, buses and other commercial vehicles”.

[Paragraph 24.19.]

By its Resolution on the Commission’s Report Government allowed a mark up not exceeding 10 per cent of the ex-factory price in the case of cars and jeeps and $7\frac{1}{2}$ per cent in the case of commercial vehicles, without the monetary ceiling. Since then, while increases in prices of vehicles have been allowed, this has been limited to the actual amounts involved, without considering it necessary to raise the margin of profit thereon either for the manufacturer or the dealer. Three of the automobile producers have complained against this “freeze”. The question is discussed further in our Report on Fair Selling Prices of Automobiles.

4.26. Recommendation :

“A rigid system of price control is likely to have adverse repercussions on the development of the automobile industry. Under present conditions, it would not be equitable to adopt “fair prices” as

the maximum prices. The difficulties involved in determining fair prices are explained in paragraphs 20.1 to 20.11."

[Paragraph 24.20.]

4.27. Recommendation :

"The interests of the consumer can be adequately safeguarded by replacing the present system of price control by a more flexible system under which no maximum prices are fixed, but subject to general obligation not to charge excessive prices, the manufacturers are left free to vary prices at their discretion and periodic investigations are held into their costs and profits to ensure that the obligation is actually fulfilled by them. Whenever a shortage develops with respect to any class of vehicles, speedy and effective action should be taken to relieve the shortage. Careful watch should be maintained over the rates of dividend declared by the manufacturing firms with a view to ensuring that a reasonable proportion of their profits is ploughed back into reserves".

[Paragraph 24.21.]

4.27.1. Government stated in the Resolution on the Report that the manufacturers were permitted to revise the prices subject *inter alia* to the condition that a month's notice of any variation would be given to Government so that they might intervene, if the change proposed was *prima facie* unreasonable. Later, however, it was noticed that one month's period was not sufficient, and the manufacturers were directed not to revise the prices without the prior approval of Government.

4.27.2. Two of the manufacturers have represented that the automobile units have not been left free to vary prices from time to time according to changes in costs. Any price increase requires the prior approval of Government which is given after a long time and hence the industry is put to loss. Besides, such increases are permitted only to the extent of increase in the costs of imported c.k.d. packs, excise duty and sales tax. Recently, however, a small increase was

allowed to off-set partly the higher cost of indigenous manufacture. Another unit has stated that the recommendations have not been implemented, while the fourth one feels that they are rigorously enforced.

4.28. Recommendation :

“The approved manufacturers should maintain their cost data in sufficient detail to enable the costs of production of individual assemblies as well as of complete vehicles to be easily ascertained”.

[Paragraph 24.22.]

Government had in their Resolution impressed this recommendation upon the automobile manufacturers.

4.29. Recommendation :

“The margins between the current net dealer prices and the ex-works costs of the vehicles produced by the approved manufacturers are examined in paragraphs 21.7 to 21.15. The margins are not considered unreasonable in the case of any model of car or truck, except diesel trucks (including diesel conversion trucks) produced by Premier Automobiles, the margins in respect of which vary from 11 per cent to 17 per cent of the ex-works costs. Having regard to the special features of this case, it is recommended that Premier Automobiles should be asked to reduce their net dealer prices for diesel trucks (including diesel conversion trucks) to no more than 10 per cent above their ex-works costs after adjustment for the revised duties recommended in paragraph 22.6”.

[Paragraph 24.23.]

The erstwhile Ministry of Commerce and Industry informed the Commission in January 1958 that Premier Automobiles was advised to reduce its prices and that it was done.

4.30. Recommendation :

“The current net dealer prices of P-6 diesel engines (of both the exhaustor and the non-exhaustor types)

produced by Simpson & Co., show a margin of 7 per cent over their ex-works costs, which is considered reasonable. The net original equipment prices for these engines show a small loss in the case of the exhauster type and a small margin in the case of the non-exhauster type. These figures however, will undergo substantial changes as the company increases its imports of built-up engines and also expands its manufacture of components. The company should effect the necessary adjustments in its prices as its production and imports increase".

[Paragraph 24.24.]

The then Ministry of Commerce and Industry informed the Commission in January 1958, that the prices of Perkins P-6 engines were considered in the light of the Commission's recommendation and that it was decided that for sales to vehicle manufacturers for original fitment to vehicles, the margin of profit on automotive diesel engines made by the indigenous firms should not exceed $7\frac{1}{2}$ per cent of their ex-works costs.

4.31. Recommendation :

"If a case is made out for a higher duty in respect of any individual component included in the groups on which reduced duties have been recommended the matter may be referred to the Tariff Commission for examination and interim assistance may be given to the section of the industry concerned through import control".

[Paragraph 24.28.]

This recommendation was noted by Government but no case has been referred to the Commission for examination so far.

4.32. Recommendation :

"Import control with respect to automobiles should be so administered that the volume of imports allowed to different manufacturers is in fair relation to their manufacturing progress. Situations:

may arise in which although, in accordance with this principle, there would be justification for curtailing the volume of imports allowed to a particular manufacturer the country's requirements of the vehicle assembled by him cannot be allowed to suffer. In such cases, arrangements should be made for imports through (or on account of) the State Trading Corporation of the vehicle concerned (or a suitable substitute for it), in order to meet the country's requirements".

[Paragraph 24.30.]

The former Ministry of Industry had stated that foreign exchange allocated to the vehicle manufacturers was related to their manufacturing progress. There has been no occasion to consider utilising the services of the S. T. C. for import of vehicles.

4.33. Recommendation :

"Government may examine the possibility of issuing import licences of one year's validity for the raw materials required by this industry".

[Paragraph 24.32.]

We are informed that this recommendation has been implemented and that licences have been issued with one year's validity.

4.34. Recommendation :

"The manufacturers should be granted adequate import licences to cover their requirements of raw materials for experimental and developmental purposes".

[Paragraph 24.33.]

The then Ministry of Industry had informed us that every effort was made to comply with this recommendation. One of the producers has, however, stated that no *ad hoc* licence is being granted for experimental and developmental purposes. Another manufacturer on the other hand has stated that Government have not refused any application from manufacturers for import licences to cover their requirements of raw materials for these purposes.

4.35. Recommendation :

“Since uniformity between civilian and army vehicles will help standardisation, the transport authorities may examine the possibility of amending Rule 120 of the Motor Vehicles Act so as to prescribe the same maximum width for civilian vehicles as is adopted for army vehicles”.

[Paragraph 24.34.]

The recommendation was found to be unexceptionable by the then Ministry of Transport and Aviation who had informed us that the State Governments were advised to amend their Motor Vehicles Rules accordingly. As a result, the State of Andhra Pradesh is stated to have amended its Motor Vehicles Rules prescribing the overall width of transport vehicles at 2.5 meters. It is likely that some of the States have followed suit but definite information is not available.

4.36. Recommendation :

“Government may consider the desirability of appointing Field Officers under the Development Officer (Automobiles) for the three regions where the industry is located”.

[Paragraph 24.35.]

We understand that Government agreed to deploy the services of two Development Officers, one each for Bombay and Calcutta and one Assistant Development Officer for Madras. But in view of the shortage of staff and other administrative difficulties, the scheme could not be implemented. One of the manufacturers has stated that the D. G. T. D. takes care of the problems of the industry and that Development Officers pay periodic visits to the various factories to keep themselves abreast of the developments.

CHAPTER II

PROGRESS AND PRESENT POSITION OF THE INDUSTRY

5.1. Since the development of the automobile industry has been traced and dealt with in the two previous reports of the Commission, we are not entering into the historical development or other matters connected therewith for the

5. Progress made by the industry since 1956 and its present position

period prior to 1956. At the time of the last inquiry in 1956 there were eight units with approved programmes to manufacture different types of automobiles. Subsequently, during the Second Plan period, one of the manufacturers, namely, Automobile Products of India Ltd., (A. P. I.) dropped out of the industry. In 1957, due to the serious foreign exchange crisis certain modifications in the approved manufacturing programmes of the manufacturers became necessary and all the units were advised to lay greater emphasis on the achievement of progressive indigenisation with regard to their vehicles and a number models for which substantial amount of foreign exchange was required were, on the advice of Government, deleted from the manufacturing programme. As a result of this Hindustan Motors, Premier Automobiles and Standard Motors were advised to give up the manufacture of Studebaker, Dodge/Desoto/Plymouth and Standard Vanguard cars respectively. Hindustan Motors was permitted to enter into a collaboration agreement with Vauxhall Motors of U. K. for the manufacture of Bedford trucks in lieu of Studebaker trucks, as the collaborators of the latter were going out of business in U. S. A. Approval was accorded to Ashok Leyland to manufacture heavier duty vehicles known as Tiger/Titan, the units proposal being to manufacture engine alone and to import the whole chassis more or less in C. K. D. form. This was, however, subsequently given up around 1960. In 1959 Government of India set up an *ad Hoc* Committee under the Chairmanship of Shri L. K. Jha with the following terms of reference :

- (a) To review the progress of the automobile and automobile ancillary industries and recommend measures to increase the indigenous content of the different vehicles in the shortest possible time, keeping in view the targets and schedules envisaged in 1956, when the manufacturing programmes of the different producers were approved;
- (b) To recommend measures to be taken to reduce the cost to the consumer of different vehicles (car, jeep and truck) under manufacture by the automobile industry and suggest the most appropriate pattern of organisation of the future expansion of the industry to ensure low-cost production ;
- (c) To examine the feasibility of producing a low-cost passenger car within the price range of Rs. 5,000 to Rs. 7,000 including within the scope of such examination not only schemes previously presented to Government, but also other models of cars that have been developed in different countries and suggest ways and means of manufacturing such a car in the country;
- (d) To recommend targets of production of different types of vehicles for the Third Five Year Plan ; and
- (e) To indicate the financial implications including foreign exchange of development programmes that might be suggested under (a), (b) and (c) above”.

This Committee made an assessment of the progress made by the industry and submitted its report to the Government in 1960. It considered the progress made by the industry satisfactory on the whole and particularly in the last few years preceding its report. It observed that the rate of progress made by individual manufacturers has not been uniform and highlighted certain difficulties confronting the industry in this context. The decision of the Government on the Committee's report which also contained certain ancillary recommendations was announced in the Ministry of Commerce and Industry Resolution No. AE. Ind. i(90)/60, dated

6th September, 1960. As regards the low-cost car, the Committee after examining the various proposals received by it had offered its general observations on the issue and left it to the Government to take a final decision. Subsequently, Government set up an expert Committee known as 'Pande Committee' to explore the feasibility of manufacturing small cars in the country, reference to which has already been made in paragraph 4.14.3.

5.2. During the course of the Third Plan certain programmes for manufacture of new or modifications of existing vehicles were approved by Government. These are shown below :

- (i) Ashok Leyland was permitted to manufacture a heavier chassis designated as Beaver/Hippo ;
- (ii) Tempo 3-wheeler, a vehicle manufactured by Bajaj Tempo Limited, was taken into the family of commercial vehicles during this period. Bajaj Tempo's proposal for the manufacture of a 4-wheel version of Tempo vehicles in addition to its 3-wheelers was also approved;
- (iii) TELCO, Hindustan Motors and Premier Automobiles were permitted to manufacture heavier chassis—a modification of their existing chassis—along with the models they were already manufacturing. These are designated as TMB "1210", Hindustan's "TK series" and Premier's "PT-230" respectively;
- (iv) Standard Motor Products was permitted to manufacture 1-ton vehicles whose basic chassis was that of Standard Vanguard which it was advised to give up after 1957;
- (v) As regards vehicular diesel engines, Simpson and Co. was permitted to manufacture a new version of the Perkins engines designated as P/6-354. Premier also took over from A. P. I. its manufacturing activity in respect of Meadows diesel engines. Hindustan Motors and Premier Automobiles were also licensed to manufacture 15,000 automobile diesel engines each.

- (vi) Simpson and Co. was permitted to manufacture 12000 nos. of chassis.
- (vii) Mahindra and Mahindra which had been granted a licence to manufacture 2000 nos. of 1-tonne jeep trucks in 1961 was allowed to discontinue the production of these trucks in 1965; instead, the unit was allowed to undertake the manufacture of $\frac{3}{4}$ tonne fully forward jeep truck designated as FC-150 in 1965.

5.3. At present there are seven units engaged in the manufacture of automobiles in the country besides one unit which makes only engines suitable for automobiles and tractors as under :—

- (i) Hindustan Motors Ltd., Uttarpara,
- (ii) Premier Automobiles Ltd., Bombay,
- (iii) Standard Motor Products of India Ltd., Madras,
- (iv) Ashok Leyland Ltd., Madras.
- (v) Tata Engineering and Locomotive Company Ltd., Jamshedpur. (TELCO),
- (vi) Mahindra & Mahindra Ltd., Bombay,
- (vii) Bajaj-Tempo Limited, Chinchwad, and
- (viii) Simpson and Co. Ltd., Madras.

Those at serial Nos. (i) to (iv) and at (vi) have been in the industry for about two decades. TELCO and Simpson and Co., entered the industry during the First Plan period while Bajaj Tempo came into the field during the Second Plan period.

5.4. The first three units manufacture passenger cars and commercial vehicles. Mahindra & Mahindra manufactures jeeps and jeep-type vehicles. Ashok Leyland, TELCO and Bajaj-Tempo manufacture only commercial vehicles. Simpson and Co. produces engines and supplies them to Hindustan Motors and Premier Automobiles. TELCO and Ashok Leyland manufacture diesel commercial vehicles only. Bajaj-Tempo manufactures 3-wheelers and 4-wheelers and these are treated as commercial vehicles.

5.5. The table below shows the types of vehicles currently manufactured by different manufacturers :—

TABLE 1

Types of vehicles at present produced in India

Vehicle	Capacity	Type/Model	Name of the manufacturer
1	2	3	4
<i>Passenger cars</i>			
Small	Upto 1200 cc	Fiat 1100	Premier Automobiles Ltd.
		Standard Herald	Standard Motor Products of India Ltd.
Medium	1200 cc to 2000 cc	Hindustan Ambassador.	Hindustan Motors Ltd.
<i>Jeeps</i>			
Jeeps	2199 cc	Jeeps CJ 3 B	Mahindra and Mahindra Ltd.
<i>Commercial Vehicles</i>			
Light	Upto 3 tonnes	Dodge/Fargo D300 and D250	Premier Automobiles Ltd.
		Bedford Full forward control.	Hindustan Motors Ltd.
		Standard 20	Standard Motor Products of India Ltd.
		Tempo Hanseat Tempo Viking	Bajaj Tempo Ltd.
		Jeep FC 150	Mahindra and Mahindra Ltd.

1	2	3	4
Medium	3 to 5 tonnes	Dodge/Fargo 109PA6, 89PA6, 99PA6, 109P6, 109T, 109M4, PT195, 89P6, 99P6, 89T, 99T, 89M4, and 99M4 Bedford J4S, J4L, J4E and SB	Premier Auto- mobiles Ltd. Hindustan Motors Ltd.
Medium Heavy	5 to 9 tonnes	Tata Mercedes Benz L-312, LA-312, L-1210, LP-312, LP-1210.	Tata Engineering and Locomotive Co. Ltd.
Medium Heavy	5 to 9 tonnes	Commet passenger Chassis ALCOP 3/1, 3/2, 3/3 Commet goods chassis ALCO 3/1, 3/2, 3/3	Ashok Ltd. Leyland
Heavy	Over 9 tonnes	Beaver/Hippo	Ashok Ltd. Leyland

There are today in the country only 3 types of passenger cars with one model each. There has been very little change of models for many years in so far as chassis, engine, gear box and axle are concerned and even the body of the present models has not undergone any change for quite some years. In the case of Standard car the present model has been in production since 1962, that is for six years. The Ambassador car has undergone no change of model from 1957 and has been maintaining the same model for more than 11 years; in 1963 the OHV was introduced with some modification in the body. In the case of Fiat the basic features are the same from before 1957, but the body panels were last changed in 1964. This is almost a record for any country considering that in the case of passenger cars two or three years is the usual period for the obsolescence of the model. In commercial vehicles of one tonne G.V.W. or less there are six basic models manufactured by

five units. For the G.V.W. 3 to 5 tonnes, there are two manufacturers each with one basic model; the same is the case for vehicles with G.V.W. between five and nine tonnes; for vehicles above 9 tonnes, there is only one manufacturer with two basic models. There is no doubt a multiplicity of manufacturers but not that of models. For the smallest size of commercial vehicles in the case of Bajaj Tempo, there are two models one with three wheels and the other with four wheel chassis. While it can be argued that the number of manufacturers of the small commercial vehicles is large the question of reduction of models does not arise, since no one manufactures more than one basic model. It cannot therefore be said that there are too many models or that there have been too frequent changes. The low volume of production stands undoubtedly in the way of the normal change in models.

5.6. Brief particulars of each of the eight units indicating also the progress recorded by them since 1956 are given below and more general data are provided in Appendix VIII.

5.6.1. Hindustan Motors Ltd.

5.6.1.1. The Company continues to be under the same management namely, Birla Brothers Private Ltd., as at the time of the last inquiry in 1956. The authorised capital of the Company as on 31st March 1966 was Rs. 20 crores. The paid-up capital, sales turnover and dividends distributed by the Company during its accounting years 1956-57, 1960-61 and 1965-66 have been as follows:

	(Rs. in lakhs)		
	1956-57	1960-61	1965-66
Paid-up capital	658.7	819.6	819.6
Sales turnover	1002.6	3045.4	397.4
Dividends distributed	6.8	87.1	102.5

Of the total share capital, an amount of Rs. 18.50 lakhs is held by non-resident individuals. The Company has obtained loans from a few foreign lending institutions.

5.6.1.2. Its collaboration agreements with Morris Motors Ltd., U. K., Studebaker Packard Corporation, U.S.A., Borgwarner Corporation—Warner Gear Division, U.S.A. and Ross Gear and Tool Co., U.S.A. existing at the time of the last inquiry were terminated. At present the company has collaboration agreements with General Motors Corporation, U.S.A. for the manufacture of G.M. Vehicles as may be assigned by them, and Vauxhall Motors Ltd., U.K. for the manufacture of Bedford trucks. The two agreements entered into in 1957 and 1959 respectively are for an unspecified period.

5.6.1.3. The serious foreign exchange difficulties which developed in 1958 after the Suez Canal crisis, led to substantial alteration in the company's earlier manufacturing plans. Manufacture of Studebaker cars was advised to be given up, while that of Baby Hindustan too had to be abandoned. About the same time, the Studebaker Corporation was going out of business in U.S.A. Hindustan Motors was, therefore, permitted to enter into collaboration agreement with Vauxhall Motors of U.K. to take up manufacture of commercial vehicles designed as Bedford with Perkins P-6 diesel engines in lieu of Studebaker trucks. Early in 1963, the then Ministry of Industry permitted the unit to expand its capacity for the manufacture of Bedford trucks from 6,000 to 15,000 nos. per annum on multiple shift operation subject to the condition that the capacity upto 20 per cent of its production of trucks should be developed for manufacture of spare parts. The unit was subsequently advised to effect substantial expansion before September 1965. By another licence issued to it in 1963, the company was permitted to manufacture automotive diesel (Bedford) engines with an annual capacity of 15,000 nos. which included 3,000 nos. of petrol engines. In 1965 the unit was also given permission to take up the manufacture of a heavier type of Bedford vehicle designated as TK series within the overall capacity of 15,000 and a gross vehicle weight not exceeding 11,340 kgs. (25,000 lbs.) capable of being operated on a mixture of diesel and petrol. The unit has also very recently commenced the manufacture of a light commercial 1-tonne truck.

5.6.1.4. Hindustan had a programme for the progressive increase in the manufacture of Bedford trucks spread over two stages. The first stage consisted of increasing the production capacity from 6,000 to 10,500 nos. per annum. The second stage comprised a further increase of this to 15,000 trucks and also the manufacture of 15,000 Bedford diesel/petrol engines per annum. Simultaneously, there was also a significant improvement in the indigenous content of the trucks.

5.6.1.5. According to the latest information available, the unit has to import the following items for the vehicles it manufactures:

<i>Assembly or sub-assembly</i>	<i>Items imported</i>
A. Ambassador Cars	
Engine . . .	Camshaft bearingliner; carburettor; chain tensioner; main shaft interceptor.
Clutch . . .	Clutch thrust bearing.
Transmission . . .	Assembly gear shift lever.
Cooling . . .	Water pump bearing assembly.
Fuel . . .	Petrol pump.
Steering . . .	Steering rack assembly; steering column tube assembly.
Frame and chassis . . .	Bearings; fasteners and miscellaneous items.
Body and upholstery . . .	Back light glass; wind screen glass; button push locking.
B. Bedford Trucks	
Engine . . .	Engine diesel/petrol C.K.D. power unit mounting assembly.
Electrical . . .	Windscreen wiper motor, ignition and starter switch, key and switch lock assembly.

<i>Assembly or sub-assembly</i>	<i>Items imported</i>
Propeller shaft . . .	Propeller shaft bearing support and bearing assembly.
Rear axle . . .	Axle housing and axle-tube LH/RH, oil seal pinion shaft, case differential, cover differential case.
Steering . . .	Tie rod, steering C.K.D., front cross member tube.
Brakes with brake drums	Ball crank lever hand brake, brake pipe assembly, brake drum front, hose assembly, foundation assembly, hydraulic components, hand brake cable assembly.
Frame with chassis . .	Bearings and fasteners.
Body and upholstery . .	Pocket lid lock, body panels, engine cowl panel and cover assembly, crown and skirt panels, fender LH/RH, wind screen glass.
Instruments . . .	Instrument cowl.

5.6.1.6. The company employed on an average 12,578 workers during 1966 and 12,135 workers during the first six months of 1967.

5.6.2. Premier Automobiles Ltd.

5.6.2.1. There has been no change in the management of this company. Since the Commission's last report Aero-Auto Ltd., Bombay continues to be the Managing Agents of the company. The authorised capital of this unit is Rs. 25 crores as on 30th June 1966. Its paid-up capital, sales turnover and dividends distributed during 1956-57, 1960-61 and 1965-66 have been as shown below:

	(Rs. in lakhs)		
	1956-57	1960-61	1965-66
Paid-up capital	220.3	557.5	747.8
Sales turnover	1808.7	2273.9	2851.0
Dividends distributed	13.0	49.8	44.9

Of the paid-up capital, shares of the face value of Rs. 2,58,800 are held by non-Indians. In connection with its expansion programme for cars and trucks, the company is contemplating to expand its capital by issue of debentures to the tune of Rs. 10 to Rs. 12 crores and has secured loans of over a million dollars foreign exchange.

5.6.2.2. Of the five foreign companies with which Premier Automobiles had collaboration agreements at the time of the last Report, the agreement with Dodge Bros., (Britain) was terminated on 30th September 1961. The agreement with Monroe Auto Equipment expired on 31st December 1966 and has not been renewed. The following agreements which were in force at the time of the last Report are in force even now.

	Date. of agreement	In force upto
(i) Chrysler Corporation, U.S.A.	1-10-62	30-6-67 (Negotiations for renewal are under way)
(ii) Fiat, S.P.A. Torino, Italy	1-7-61	30-6-71
(iii) Rockwell Standard Corporation, U.S.A.	1-1-63	30-9-70

The company has also entered into collaboration agreements with Henry Meadows Ltd., England on 5th October, 1962 for the manufacture of 4 DC 330 series Meadows Engines and with International Nickel Co. Ltd., England on 28th June 1966 for the manufacture of Spheroidal Graphite Iron Castings.

5.6.2.3. Since the Commission's last inquiry the company has established its stamping plant and press shop at Dombivli, near Kalyan in addition to its assembling unit at Kurla and mechanite foundry at Wadala.

5.6.2.4. Towards the end of 1957 Premier Automobiles was permitted to manufacture annually 500 nos. of a light weight truck of 1-2 tonnes pay load ("Dodge/Fargo 4x2 and 4x4 petrol trucks in 116" and 120" WB of a pay load of 1-2 tons and a maximum laden weight of 9500 lbs."), within its licensed capacity for trucks and power wagons. After the Suez Canal crisis referred to earlier this unit too like

Hindustan Motors was advised by Government to abandon the manufacture of Dodge/Desoto/Plymouth car. In August, 1961 the firm was licensed to manufacture diesel engines designated as Meadows 4 DC 330 series—2 models diesel engines (both vehicular and industrial) with a capacity of 3,000 nos. on double shift. Under this licence, the unit took over from A. P. I. Ltd., its activity in regard to the production of Meadows engines. By a modification to this in 1963, these engines were designated as Henry Meadows diesel engines-DC 330. Early in 1963 Premier Automobile was granted an expansion licence by which the capacity for trucks was increased from 7,000 to 15,000 nos. "Dodge/Fargo medium truck and bus chassis less the power unit with a pay load in the range of 3/5 tonnes and maximum front axle loading, rear axle loading and GVW of 3180 kgs., 7030 kgs., and 8850 kgs. respectively"). This capacity was inclusive of the light trucks referred to above. In September 1963, Government licensed this unit to manufacture a new item namely, automobile diesel engine with a total capacity of 15,000 nos. per annum, inclusive of Meadows diesel and petrol engines being manufactured by it. We are informed that this programme has not yet materialised. The company also obtained in 1966 permission to manufacture Dodge/Fargo PT-230 model heavy duty vehicles of a GVW in excess of 23,000 lbs.

5.6.2.5. This unit had a phased manufacturing programme covering 26 phases spread over a period of 12 years commencing from January 1954 in respect of Fiat cars, Dodge/Fargo diesel Buses/Trucks, Dodge/Fargo petrol trucks (small wheel base), Dodge/Fargo petrol trucks (diesel chassis converted to petrol) and Dodge/Fargo 1-ton power wagon. The implementation of the above phasing upto 1960 was assessed by the Jha Committee. In connection with the present inquiry, Premier Automobiles has informed us that at the end end of 1966 the indigenous contents of the vehicles manufactured by it were as follows :—

Fiat 1100	97.72%
Dodge/Fargo diesel trucks & buses . .	95.90%
Dodge/Fargo petrol truck (small wheel base) .	70.40%

On the basis of information furnished by D.G.T.D. the principal components and parts still imported by this unit for the vehicles manufactured by it are given below:

<i>Assembly or sub-assembly</i>	<i>Items imported</i>
A. Fiat 1100 car	
Engine	Valve tappet; thermostat.
Propeller shaft	Synchroniser flexible joint propeller shaft.
Steering	Complete steering assembly.
Frame and chassis	Pressure bonded bushes; seven types of bearings.
Body and upholstery	Wind shield glass, fuel filter locks.
Instruments	Rim instrument dial.
B. Kew Dodge Truck	
Engine	Idling control assembly.
Transmission	Main shaft 4th speed bush.
Fuel	Assembly thermostat.
Electrical	Oil pressure switch.
Rear axle	Bearing rear drive pinion.
Steering	Steering assembly complete.
Frame with chassis	Bearings—ball, roller and needle fasteners; hub and wheel stud.

5.6.2.6. The average daily number of workers employed by the company during 1966 was 7813, while during the first six months of 1967 it was 7534.

5.6.3. Standard Motor Products of India Ltd.

5.6.3.1. This company continues to have Standard Motor Company (India) Private Ltd., Madras as its Managing Agents. Since the last Report in 1956, there has been no change in its foreign collaboration, excepting that the cons-

titution of the collaborators in U.K. underwent certain changes during the period. The name of the U.K. firm was changed from the "The Standard Motor Co. Ltd." into "The Standard Motor Co. (1959) Ltd." and again into the "The Standard-Triumph Motor Co. Ltd." which is the present company with whom its current collaboration agreement subsists. In England, the Standard-Triumph Group of Companies has been absorbed by the Leyland Motor Corporation and are now the wholly-owned subsidiaries of Leylands. The authorised capital of the company is Rs. 2 crores. Its paid-up capital at the end of 1956, 1960 and 1965, sales turnover and dividend distribution during each of these years were as follows:

(Rs. in lakhs)

	1956	1960	1965
Paid-up capital	56.9	100.0	125.0
Sales turnover	256.3	389.8	452.7
Dividends distributed	2.3	8.7	8.4

Non-Indians hold equity and deferred shares of a total value of Rs. 27,73,024. The company has recently issued equity shares to the tune of Rs. 25 lakhs. We are informed that this capital expansion is being undertaken with a view to repaying a few medium term loans the company has obtained for expansion of building and plant during the last few years.

5.6.3.2. Sometime in 1957 Standard Motors had to give up the production of Standard Vanguard cars and has been producing thereafter "Standard 10" cars. In 1963 it was licensed to take up the manufacture of Standard 1-ton truck as a new vehicle with a capacity of 1,500 trucks per annum plus 20 per cent production for manufacture of spare parts in order to help it utilise the Standard Vanguard petrol engines, the production of which was suspended. The unit has asked for an expansion licence upto 6,000 cars per annum and 3,000 trucks. It has informed us that in regard to the latter, a letter of intent has been received from Government. It is also introducing a 4-door car model by the end of this year or early next year.

5.6.3.3. At the time of our last Report Standard Motors had made little progress in regard to the manufacturing programme of Standard 10 though some progress in respect of the Standard Vanguard had been made. By the time the *Ad hoc* Committee inquired into the industry, the company had discontinued the manufacture of Vanguard cars and in the case of Standard 10 it had attained indigenisation of 32.5 per cent. The Committee however observed that the progress of Standard Motors in this direction had been the slowest of the three passenger car manufacturers. The following deletion percentages achieved by this company during the last six years in regard to Standard 10 Herald cars and 1-tonne truck have now been furnished to us:

	Standard Herald car	1-tonne truck
1961-62	45.23%	
1962-63	47.27%	
1963-64	59.94%	
1964-65	64.41%	
1965-66	75.39%	75.59%
1966-67	88.85%	84.00%

The unit imports at present the following items for its products:

Assembly or sub-assembly

सत्यमेव जयते

Items imported

A. Standard Herald

Engine	Camshaft; outer axle shaft and flinger assembly.
Rear axle	Differential case.
Steering	Steering assembly complete.
Frame and chassis	Lower wish bone brackets; all types of bearings; fasteners.
Body and upholstery	Door vent KD kit, Rear deck KD assembly; Door hinge assembly, wheel arch panel front, wheel arch panel rear, wheel arch panel inner, door panel outer, valence panel assembly, 'A' post assembly, lock set assembly.

<i>Assembly or sub-assembly</i>	<i>Items imported</i>
B. Standard 1-tonne truck	
Engine . . .	Front engine plate assembly, push rod, oil pump assembly.
Clutch . . .	Clutch thrust bearing; top cover.
Transmission . . .	Idler lever bracket assembly, fork selector 3rd and top gear lever lower assembly, gear control shaft assembly, mounting bracket gear change, gears (a/l).
Cooling . . .	Water pump bearing.
Suspension . . .	Front suspension unit; compensator unit assembly.
Rear axle . . .	Pinion housing assembly, taper roller bearing, differential case assembly, cross pin differential, crown wheel bolt, axle shaft.
Steering . . .	Steering unit with column and wheel; trunnion bracket.
Brakes with brake drums	Hand brake cable front.
Wheels . . .	Rear hub, taper roller bearings.
Frame with chassis . . .	Post 'A' assembly; reinforcement post, nuts, bolts, fasteners.

5.6.3.4. It employed 1,778 workers during 1966 and 2,056 workers during the first six months of 1967 on an average.

5.6.4. Ashok Leyland Ltd.

5.6.4.1. The company came to be known by its present name around 1955, when the former Ashok Motors Ltd. entered into a collaboration agreement with Leyland Motors Ltd., Lanchashire, U.K. The collaboration agreement is for a period of 20 years ending 5th December 1975. With increase in the participation of share capital by Leyland Motors Ltd., to 60% in 1962 the unit has become a subsidiary

of Leyland Motors Ltd., from that date. Upto March 1955 Car Builders Ltd. functioned as its managing agents. In that year the managing agency was terminated and it was resolved to place the company under a director. At present the company is managed by a Managing Director. The authorised share capital of the company was Rs. 10 crores as on 30th September 1966. The paid-up capital, sales turnover and dividends distributed by the company during 1956-57, 1960-61 and 1965-66 have been as follows :

(Rs. in lakhs)

	1956-57	1960-61	1965-66
Paid-up capital	151.2	345.0	672.9
Sales turnover	426.1	804.7	2115.5
Dividends distributed	6.5	20.3	60.5

Equity shares for a total amount of Rs. 409 lakhs are held by non-Indians. The company has a proposal to expand its capital for completing the heavy duty vehicle project. The amount required is estimated at 1,685 million sterling for the importation of plant and machinery. Its collaborators have agreed to provide this amount either by participation in equity capital or by way of loan.

5.6.4.2. At the time of the Commission's last Report Ashok Leyland had an annual capacity of 1,200 Comet chassis with a programme to reach 2,500 within the next four years. In 1958 this unit was approved for increasing its capacity for the manufacture of Comet models to 3,000. Simultaneously, it was also permitted to undertake manufacture of a heavier vehicle known as Titan/Tiger with a capacity of 600 per annum. Subsequently, however, the programme of manufacture of Titan/Tiger was given up. In 1960, the unit's proposals for increasing its capacity of Comet vehicles to 5,400 per annum and Leyland engines from 600/680 to 1,200 nos. were approved. In 1964 another licence was given to the unit for the manufacture of a new series of heavy duty vehicles with a capacity of 2,000 per annum. The type of vehicle as described in the licence is "Beaver-Heavy duty passenger and goods chassis with a GVW upto 16,340 kgms. (the goods chassis to be 4x2, 4x4 and 6x6 forms)".

5.6.4.3. The phasing of the manufacturing programme of this unit consisted of 24 stages, the deletions being on items like tyres, tubes, batteries and other components. At the end of 1956 the indigenous content of this unit stood at 10.98 per cent which rose progressively to 40.24 per cent in 1960, 58.82 per cent in March 1963 to 86.34 per cent by the end of September 1966 and to 88.53 per cent in March 1967. The unit imports the following components for its comet vehicles according to the position reported by D.G.T.D.

<i>Assembly or sub-assembly</i>	<i>Items imported</i>
Engine	Rear engine support, timing back, plate; connecting rods; cam shaft; gears timings; tappets; push rods, damper; crank shaft.
Rear axle	Crown wheel/pinion; gear bevel; axle shaft; axle beam; track rod; axle arms and tube.
Steering	Steering CKD.
Frame with chassis	Frame side members, bearings, fasteners.
Instruments	Driving plate, trunnion assembly.

5.6.4.4. The company employed on an average 2,706 workers during 1966. During the first six months of 1967, the number increased to 2,756.

5.6.5. Tata Engineering and Locomotive Company (TELCO)

5.6.5.1. Tata Industries Private Ltd. continue to be its Managing Agents. It has set up another factory at Poona, where it manufactures machine tools, press tools and dies. The authorised capital of the company is Rs. 20 crores of which Rs. 16.40 crores has been subscribed and paid-up as on 31st March 1966. Of this, ordinary shares worth Rs. 198 lakhs are held by non-Indians, with the collaborators owning shares of Rs. 192 lakhs. At the last annual general meeting of the share holders the Directors had announced a

proposal to issue bonus shares in the ratio of 1 to 6 equity shares by capitalising the amount standing to the credit of share premium account and part of the general reserve. On this basis, 2,05,000 equity shares of the value of Rs. 100 each have been issued as bonus shares. The position with regard to the company's paid-up capital as at the end of 1956-57, 1960-61 and 1965-66 and sales turnover and dividends distributed during each of these years is as follows:

(Rs. in lakhs)

	1956-57	1960-61	1965-66
Paid-up capital	700.0	1,000.0	1,639.6
Sales turnover	2,144.6	3,755.0	7,947.7
Dividends distributed	44.3	125.8	191.3

For manufacturing automobiles the company entered into a 15-year technical aid agreement with Daimler Benz A.G. of West Germany on 1st April 1954. TELCO was given permission early in 1958 to increase its capacity from 6,000 to 7,200 trucks per annum and in the following year it was revised upward to 12,000. In 1961, the company was permitted to increase its output from 12,000 to 24,000. However, one of the conditions to the licence was that the expansion shall be effected in such a way that the annual capacity of 24,000 is reached before the end of 1964 and that the power unit so manufactured would be suitable for operation of a mixture of diesel and petrol.

5.6.5.2. TELCO had phased its manufacturing programme in ten stages commencing from 1954 and completing it in 1963. At the time of the last Report even the first phase had not been completed and the Commission was therefore not able to assess the progress. But by 1959, the unit had made up the leeway and the Jha Committee observed that its performance had been equal to its promise. By 1961, it had firmly established the production of 1,000 vehicles per month and two years later cowl production had also been

established. It continues to import the following components for its different makes of vehicles.

<i>Assembly or sub-assembly</i>	<i>Items imported</i>
Engine . . .	Piston rings, governor without safety valve valve tappets.
Clutch . . .	Clutch bearing.
Fuel . . .	Thermostat.
Electrical . . .	Main light switch, glow plug switch, adapter.
Propeller shaft . . .	Bracket centre bearing.
Suspension front . . .	Forging front axle beams.
Rear axle . . .	Rear axle supporting tube.
Steering . . .	C.K.D. steering gear set.
Brakes with brake drums	Brake master cylinder, Brake valve, wheel brake cylinder.
Frame with chassis . . .	Bearings, fasteners.

5.6.5.3. The average number of workers employed by this unit during the first six months of 1967 was 15,934 as against 15,789 during the previous year.

5.6.6. Mahindra and Mahindra Ltd.

5.6.6.1. This unit has its registered office in Bombay while its manufacturing activities are spread over three locations namely, Kandivli, Worli and Ghatkopar. It has plans to transfer all its manufacturing facilities to the new building at Kandivli. As at the end of October, 1966, the authorised share capital of the company was Rs. 5 crores as against which the issued and subscribed share capital was Rs. 3.19 crores. In the 21st annual general meeting of the company held in April 1967, the amount of authorised share capital was however, increased to Rs. 10 crores. The company's

paid-up capital, sales turnover and dividend distribution during the years 1956-57, 1960-61 and 1965-66 were as follows:

	(Rs. in lakhs)		
	1956-57	1960-61	1965-66
1. Paid-up capital . . .	80.0	187.0	319.0
2. Sales turnover . . .	2441.3	1542.3	2042.9
3. Dividends distributed . .	11.1	24.3	40.8

Of the paid-up capital 3,90,443 equity shares of Rs. 10 each and 433 preference shares of Rs. 100 each are held by non-resident share-holders. The company has on hand an expansion programme for which it has applied for certain foreign currency loans from AID. Its requirements of rupee finance also is estimated at Rs. 872.88 lakhs, of which Rs. 664.00 lakhs are proposed to be raised by the issue of additional shares and debentures. It had obtained the consent of the Controller of Capital Issues in October 1965, to raise additional share capital to the extent of Rs. 198 lakhs. This was subsequently amended to Rs. 66 lakhs on 31st December, 1965, to enable it to implement the expansion programme in stages consequent on the delay in receipt of the foreign currency loan. The company has informed us that an application will be made shortly to the Controller of Capital Issues for sanction to issue the additional shares/debentures.

5.6.6.2. It has collaboration agreements with Kaiser Jeep Corporation, U.S.A., Birfield Ltd., London, and Dana Corporation, U.S.A. The latter two agreements were entered into by the company in 1957 for the manufacture of front and rear axles and transfer cases respectively for the jeep range of vehicles. Kaiser Jeep Corporation and Kaiser Jeep International Corporation were known as Willys Motors Inc. and Willys Overland Export Corporation respectively at the time of the Commission's last inquiry and the agreement with them was in force upto 1964. The agreement has been renewed for a further period of ten years.

5.6.6.3. The unit was initially licensed to manufacture 2,500 Willys jeeps per annum. In 1958 it was granted a licence to increase the capacity to 5,500 jeep vehicles per annum. In 1961 the unit was permitted to expand further its capacity to 10,000 nos. which included 2,000 numbers of 1-tonne jeep trucks. To achieve this capacity, it had to effect a number of additions to the plant and changes in manufacturing operations. The jeep and truck have common engine, transmission, front and rear axles. At the request of the firm, Government agreed in 1965 that it might undertake manufacture of a 3/4 tonne fully forward jeep truck designated as FC-150 and discontinue the production of 1-tonne truck referred to earlier. In the meantime, the unit was allowed to increase its installed capacity to 25,000 nos. with the following break-up:

CJ 3B Willys Jeep	.	.	.	.	15,000 nos.
FC-150 3/4 tonne truck	.	.	.	.	5,000 nos.
Jeep Station Wagons	.	.	.	.	5,000 nos.

The manufacturing programme of this unit was spread over 16 phases in respect of jeeps and 5 phases in regard to FC-150 trucks, with the ultimate aim of attaining 97.50 per cent and 97.35 per cent of indigenous content respectively at the completion of the phases.

5.6.6.4. At the time of the Commission's last Report this unit had not completed even the first phase of its manufacturing programme. When the Jha Committee inquired into the industry in 1960 it had achieved about 65 per cent indigenous content. By 1966, the unit had completed the twelfth phase of its manufacturing programme of jeeps where the deletion was to the extent of 86.25 per cent and had taken up the fourteenth and fifteenth phases the deletions envisaged being 92.93 per cent and 96 per cent respectively. We understand that the company is expected to enter the last phase in the near future. As regards FC-150 trucks, the first phase with a deletion of 67.42 per cent had been completed by 1966 and currently the company has in hand the second phase. The third phase of its manufacturing programme involving a deletion of 84.1 per cent is also expected to be taken up in the near future. This unit imports at present

the following components for its different makes of automobiles.

<i>Assembly or sub-assembly</i>	<i>Items imported</i>
A. CJ 3B Jeeps	
Engine . . .	Valve tappet assembly, rocker arm assembly, push rod, camshaft castings.
Clutch . . .	Clutch release bearing, clutch control lever cable.
Transmission . . .	Shift levers forging, end yoke forgings, gear carrier housing axle.
Cooling . . .	Thermostat, water pump bearing, shaft and slinger.
Electrical . . .	Light switch and circuit breaker.
Steering . . .	Steering assembly C.K.D. complete.
Frame with chassis . . .	Taper roller and needle bearings, standard and special fasteners.
B. FC-150 (3/4 tonne truck)	
Engine . . .	Valvetappet assembly, rocker arm assembly, camshaft, end yokes.
Clutch . . .	Clutch release bearing, cable assembly, clutch pedal—lever to ball crank, cable assembly—ball crank lever to cross shaft, spring bolt.
Cooling . . .	Thermostat assembly, water pump bearing shaft and slinger.
Electrical . . .	Oil pressure signal switch, light switch or circuit breaker assembly.
Rear axle . . .	Axle shaft, rear axle tube, gear carrier housing.
Steering . . .	Steering gear assembly C.K.D., steering wheel, steering ball crank.

<i>Assembly or sub-assembly</i>	<i>Items imported</i>
Brakes with brake drums	Hand brake and lever assembly, master cylinder assembly, brake assembly, hand brake cable and conduit.
Wheels	Rear hub and brake drum assembly, front hub and brake drum assembly.
Frame with chassis	Roller bearings, taper roller bearing, needle bearings, fasteners.
Body & upholstery	Front doors L.H./R.H., window regulator lock door front and control, fender left and right.

5.6.6.5. The company employed 3,080 workers on an average during 1966 and 3,187 workers during the period January-June 1967.

5.6.7. Simpson & Co.

5.6.7.1. At the 1956 inquiry, the Commission had recognised this unit as a manufacturer of automobiles, because it had a programme to manufacture automobile diesel engines and had expected to complete the machining and assembling of all components before the end of the year. Its plan to manufacture 3,000 vehicle engines per annum on single shift was approved by the Government of India in 1955. In addition to diesel engines which it manufactures at present it also undertakes body building on various types of chassis, bus bodies, van bodies, ambulances and trailers. A part of its business also includes the manufacture of light engineering items such as garage cranes, wheel barrows, platform trolleys, storage tanks, water tank, hand carts etc. It has entered into an agreement with F. Perkins Limited, U.K. to provide designs, drawings and specifications for manufacture of Perkins engines. The name of this company was changed to Perkins (Peterborough) Ltd. in 1964. In March 1966 the collaboration agreement with Perkins (Peterborough) Ltd. was transferred in the name of Massey Ferguson Perkins Limited with the concurrence of the Government of India, consequent on a novation agreement being entered into between Perkins (Peterborough) Limited and Massey Ferguson Limited. The authorised capital of the company was increased from Rs. 2.5 crores to Rs. 3.5 crores in 1966. Its paid-up capital as on 31st May, 1966 was Rs. 75 lakhs of

which Rs. 71 lakhs was held by Amalgamations Private Limited. Its sales turnover as on that date was Rs. 17.81 crores.

5.6.7.2. The original capacity of the company for the manufacture of 3,000 of P6 engines was increased to 6,000 nos. on double shift in 1959 and further to 12,000 in 1963. It was simultaneously permitted to manufacture a chassis (3 to 5 tonne range) with a capacity of 12,000 nos. We understand that no appreciable progress towards this end has so far been made by the company. However, D.G.T.D. has informed us that the capacity for manufacture of crank shaft is limited to 6,000 nos. and therefore Government are considering the request of the unit to allow the import of machinery for manufacture of crank shafts to balance its capacity. The company has no plans for any expansion in the near future.

5.6.7.3. Simpson had phased its programme in four stages for P6V engines, and in two for P6/354(v) engines. The indigenous content of these engines as reported to us by D.G.T.D. at present is 95 per cent. The unit has still to import the following components for the engines it produces.

VEHICULAR DIESEL ENGINES

Perkins—Category I

1. Water pump roller bearing
2. Chain timing
3. Tensioner timing chain
4. Cable idling control
5. Cable stop control
6. Venturi assembly
7. Sprockets—Tensioner & crankshaft
8. 50% cylinder block castings
9. Cylinder head castings

Perkins—Category II and P6-354

1. Cylinder block assembly complete with liners, plugs etc.
2. Pre. filter-Fuel Oil

3. Cable—Idling & stop control & Throttle control
4. Ring—starter
5. Seal Crankshaft rear
6. Valve springs
7. Seal timing case oil
8. Thermostat
9. Filter lubricating Oil
10. Pump fuel oil lift
11. Heater induction
12. Gears—Timing
13. Crankshaft
14. Tappets
15. Push Rod
16. Cylinder head stud
17. Cylinder head castings
18. Cam shaft casting

5.6.7.4. The average number of workers employed by this company was 2279 and 2466 in 1966 and 1967 (January-June) respectively.

5.6.8. Bajaj-Tempo Limited :

5.6.8.1. This is a sister concern of Bajaj Auto Limited which manufactures scooters and auto rickshaws. Originally the factory was set up in Goregaon, Bombay, but subsequently, it was shifted to Chinchwad near Poona. It was incorporated in September 1958 and commenced manufacturing operations in that year. It produced originally 3-wheeler light commercial vehicles known as Tempo Hanseat with a sanctioned annual capacity of 1,000 vehicles and subsequently it received sanction to expand the capacity to 4,000. Recently, it has been allowed to diversify the range of its production by undertaking the manufacture of a 4-wheeler model of Tempo vehicles in addition to the present 3-wheelers, known as Viking 4-wheelers within the licensed limit. The production of this model commenced in October 1966.

5.6.8.2. Tempo 3-wheeler was being imported into India since 1950 by Bachraj Trading Corporation Limited and these were found to be very economic and suitable for Indian conditions. With the grant of a manufacturing licence the new company Bajaj-Tempo Limited was formed, its German collaborators participating upto 26% in capital investments. The unit has one model of three-wheeler chassis on which different bodies such as auto-rickshaws, pick-up trucks, delivery vans, refuse trucks, oil tankers and ambulances, are built up and supplied.

5.6.8.3. The company authorised capital is Rs. 2 crores of which Rs. 78.48 lakhs was paid-up as on 30th September 1966. The company has entered into collaboration agreement with two German firms as per details given below:

- | | |
|--|---|
| <p>(i) Vidal & Sohn Tempo-work, G.m.b.H., Hamburg-Harburg, West Germany. (now acquired by Rheinstahl Hanomag A.G., 3, Hannover, West Germany).</p> | <p>In August, 1957 for ten years and another in January, 1964 for five years for technical know-how and manufacturing of Tempo Hanseat 3-wheeler vehicle and Tempo Viking 4-wheeler commercial vehicles in India.</p> |
| <p>(ii) Zahnradfabrik Friedrichshafen A.G. Work Schwabisog G mund, West Germany.</p> | <p>In 1964, for a period of 8-10 years, for technical assistance and licence to manufacture ZG gear boxes for Viking 4-wheelers.</p> |

Bajaj-Tempo has received financial assistance from its collaborators by way of participation in share capital, against which the company has bought machinery from West Germany. In connection with the expansion of capacity, the company proposes to increase its equity capital by Rs. 70 lakhs.

5.6.8.4. According to the unit it started with an initial indigenous content of 33% which rose to 63% in 1961-62 and that by 1963 it had attained 80%. The present position of its indigenous content is said to be 92 per cent and is

expected to reach 97 per cent by the end of 1967. The items still imported by the unit are given below:

<i>Assembly or sub-assembly</i>	<i>Items imported</i>
A. Tempo 3-wheeler	
Engine . . .	Crank shaft with conrods, starter ring carburettor.
Clutch . . .	Clutch lining, clutch cable.
Transmission . . .	Drive chain.
Electrical . . .	Ignition distributors.
Suspension Front . . .	Front coil springs.
Brakes with brake drums	Brake cable.
Frame with chassis . . .	Taper roller bearings, fasteners.
B. Tempo 4-wheeler	
Engine . . .	Fan, crank shaft, starter ring, air filter, oil filter, carburettor.
Transmission . . .	Gear box housing, gear box cover, main shaft synchroniser, drive shafts, gears.
Electrical . . .	Distributor.
Suspension Front . . .	Torsion bar.
Rear axle . . .	Differential housing, differential gear crown wheel, tubes axle journal.
Steering . . .	Steering unit with drop arm, tube support
Wheels . . .	Wheel joint.
Frame with chassis . . .	Torsion bar, bearings all types, fasteners
Body & upholstery . . .	Curved windscreen, body panels.

5.6.8.5. The unit employed on an average 1,030 workers during 1966 which increased to 1193 during the first half of 1967.

5.7. There are certain variations between the percentages of indigenous content as reported by the units and those calculated on the basis of cost examinations. These have been discussed in paragraph 13.

5.7.1. It would be desirable in this context to consider the progress made in automobile manufacture in this country in the back-ground of the performance during a similar period by other countries. There are only 19 countries which manufacture automobiles; there are some others which undertake assembly operations but those need not be included. The production of commercial vehicles and passenger cars in these countries in the year 1960 and 1966 was as follows:—

TABLE 1A

Production of commercial vehicles & passenger cars in 19 countries in 1960 and 1966

(No. in '000)

Country	Production 1960			Production 1966			% of increase of				% of Commercial vehicles to total production in 1966	Population per vehicle in 1965
	Passenger Cars	Commercial Vehicles	Total	Passenger Cars	Commercial Vehicles	Total	Passenger Cars in 1966 over 1960	Commercial Vehicles in 1966 over 1960	Total over 1960			
1	2	3	4	5	6	7	8	9	10	11	12	
1. U.S.A.	6,675	1,194	7,869	8,598	1,731	10,329	28.8	45.0	31.3	16.8	2.2	
2. West Germany	1,817	238	2,055	2,830	221	3,051	55.8	(—) 7.1	48.5	7.2	5.0	
3. Japan	165	316	481	878	1,408	2,286	432.1	345.6	375.3	61.6	15.0	
4. U.K.	1,353	458	1,811	1,604	438	2,042	18.6	(—) 4.4	12.8	21.5	4.9	
5. France	1,175	194	1,369	1,786	239	2,025	52.0	23.2	47.9	11.8	4.5	
6. Italy	596	49	645	1,282	82	1,364	115.1	67.3	111.5	6.0	8.4	

7. U.S.S.R.	..	..	524	230	827	1,057	..	..	101.7	78.2	53.0
8. Canada	326	71	397	702	200	902	115.3	181.7	127.4	22.3	3.0
9. Australia	..	..	326	280	64	344	..	..	5.5	18.6	3.0
10. Spain	..	..	56	247	93	340	..	..	507.1	27.4	26
11. Brazil	..	..	132	144	83	227	..	..	72.0	36.6	41
12. Sweden	109	20	129	173	27	200	58.7	35.0	55.0	13.3	4.1
13. Argentina R.	..	..	54	134	45	179	..	..	231.5	25.1	14.0
14. Czechoslo- vakia	..	..	74	93	47	140	..	..	89.2	33.6	25.0
15. East Ger- many	..	..	70	105	15	120	..	..	71.1	12.5	21.0
16. India	24	28	52	37	36	73	54.2	28.6	40.4	48.7	659
17. Poland	..	..	35	..	34	63	..	..	80.0	53.2	72.0
18. Yugoslavia	..	..	16	32	11	43	..	..	168.8	25.6	71.0
19. Nether- lands	..	..	19	33	7	40	..	..	110.5	17.5	8.1

(Source.—The Motor Industry of Great Britain 1961 to 1967 and Facts & Figures about Automobiles published by Automobiles Manufacturers Association, U.S.A.)

5.7.2. Of the 19 automobile manufacturing countries in the world, 15 fall in the category of the 36 rich countries classified on the basis of per capita Gross National Product (GNP) of \$ 750 or above two, namely, Spain and Yugoslavia fall in the middle income group (per capita GNP of \$ 300 to \$ 750), Brazil falls in the low income group (per capita GNP \$ 100 to \$ 300) and only one—India falls in the very low income group (per capita GNP being less than \$ 100). Five of the 19 countries are in the Communist bloc with a total annual output of 4.1 per cent of all automobiles produced. The economies of manufacture, extent of collaboration or development of own design and specifications are not available in so far as the East European Countries viz., U.S.S.R., Czechoslovakia, Poland, East Germany and Yugoslavia are concerned, and no study of the situation with regard to this industry in those countries has therefore been possible. Of the remaining 14, six viz., U.S.A., West Germany, Japan, U.K., France and Italy are the chief automobile manufacturers. In Canada, vehicle manufacturing companies are owned and controlled by parent organisations in United States, the products are designed in U.S.A., the techniques of production follow closely those developed by the parent companies and many parts are also manufactured in U.S.A. Three big companies accounted for about 98 per cent of the vehicles and about one-third of the value of vehicles is comprised of imported components. Australian units are also subsidiaries of vehicles manufacturers in U.S.A. Spain has collaboration agreement with Fiat; Brazil, Argentina and India are also in a similar situation. The only two countries with a small volume of production having their own makes, standards and designs are Sweden and Netherlands, and they find themselves in this independent and happy position no doubt owing to the advanced technology at their disposal in other fields of engineering.

5.7.3. The figures in Table 1A indicate that as between 1960 and 1966 the percentage of increase was the highest in the case of Spain (541.5 per cent) one of the middle income countries and next highest in the case of Japan (375.5 per cent). Yugoslavia comes third (292.9 per cent) and Argentina fourth with 233.3 per cent. United Kingdom of all the countries registered the minimum rise of 12.8 per cent and

India stands somewhere midway with 38.5 per cent increase. The increase over the years has been higher than that of India in all other countries except in United Kingdom and the United States of America. Of the three countries which are in the low income group on the basis per capita G.N.P. India is the lowest. The number of persons per automobile in India was the lowest at 659 as against 41 for Brazil and 26 for Spain.

5.7.4. The following figures show the position of India in the background of the other automobile producing countries with regard to the area, population, G.N.P., per capita G.N.P. and the position and ranking on the basis of per capita G.N.P.



TABLE 1B

Position of India in the background of other automobile producing countries with regard to area, population, G.N.P. etc.

Sl. No.	Countries	Area in ml. sq. km.	Population in million	G.N.P. in million Rs.	G.N.P. per Capita Rs.	Position according to per capita G.N.P.	Ranking Among countries of the world	Population per vehicles in 1965	Remarks
1	2	3	4	5	6	7	8	9	
1.	U.S.A.	9.36	194.57	47,28,098	24,300	2	R	2.2	
2.	W. Germany	0.25	59.04	7,17,345	12,150	13	R	5.0	R=Rich countries ; per Capita G.N.P. \$ 750 & above.
3.	Japan	0.37	97.96	5,58,368	5,700	36	R	15.0	
4.	United Kingdom	0.24	54.60	6,34,665	11,625	16	R	4.9	M=Middle Income countries ; Per capita G.N.P. \$ 300-750.
5.	France	0.55	48.92	5,94,398	12,150	12	R	4.5	
6.	Italy	0.30	51.58	3,71,348	7,200	28	R	8.4	L=Low income countries ; Per Capita G.N.P. \$100-300.
7.	U.S.S.R.	22.40	230.60	17,29,500	7,500	26	R	53.0	

5.7.5. Of the countries producing automobiles, India has the highest population with the lowest per capital G.N.P. and stands 16th in order of the number of vehicles produced. Considering the state of the economy of the country it is a matter of great credit, that it has embarked on the venture of production of automobiles which many countries much richer than India and having better resources have not yet been able to do.

5.7.6. There is an urge to compare the situation in this country with that of other vehicle manufacturing countries. A degree of caution needs to be exercised in this matter since our country does not on any point compare with any other vehicle producing country. The closest to us in terms of population per vehicle and G.N.P. are Brazil and Spain but there is a gap of more than 15 times compared to Brazil and more than 30 times with regard to Spain. Both Brazil as well as Spain have stepped up their production at a higher rate. But the conditions neither in Brazil nor in Spain compare with those of India. Spain has a per capita G.N.P. of Rs. 4,250 and stands 40th on a list of 158 countries arranged according to per capita G.N.P. Brazil has per capita G.N.P. of Rs. 1,650 and stands 86th on the list. India with a per capita G.N.P. of Rs. 675 has 125th position on the list. The area of Spain is 5.17 lakh sq. kms. with a population of 3.16 crores, that of Brazil is 85.1 lakhs sq. kms. with a population of 8.33 crores while that of India is 30.5 lakhs sq. kms. with a population of 48.68 crores. Spain has 1/6th the area of India and 1/16th the population of this country. Brazil has almost three times the area of India and 1/6th the population of this country. The demographic and economic conditions of Spain and Brazil are entirely different and no comparison based on the development of the automobile industry in these two countries can be made with that of our country.

5.7.7. The statement in table 1A above gives percentages of the number of commercial vehicles produced to the total number of automobiles produced. The highest percentage is that of U.S.S.R. being 78.2 and the lowest is that of Italy being 6.1. India stands at a fairly high position with 48.6 and the proportion of commercial vehicles to passenger cars in this country is higher than that

of 14 out of the 19 countries in the list. The only other countries which have a higher proportion are Japan, U.S.S.R. and Poland. Both Poland as well as U.S.S.R. are in the communist bloc and there are severe restrictions in these countries on the production of passenger cars. As regards Japan, there are historical factors responsible for the preponderance of commercial vehicles over passenger cars, but there is also a shift in favour of proportionate increase in the production of passenger cars now. In 1955 the composition ratio of passenger cars was 29.4 per cent, and in 1960 and 1966 it was 34.3 per cent and 38.4 per cent respectively. Of the total of 11.79 lakhs of commercial vehicles produced 0.9 lakhs were buses and the remaining were trucks, of which 70 per cent were of the loading capacity of 1 tonne or less. Light trucks and light vans which are good for 350 to 700 kgs. load on the average have been found to be very popular and represent therefore more than 45 per cent of the total automobile production comprising of commercial vehicles and passenger cars in Japan. (Source : Guide to the Motor Industry of Japan; 1967—page 12.)

5.7.8. While the total number of vehicles produced annually in the country is in the vicinity of about 73,000 the total number of units which produce them are seven. We tried to ascertain in the course of our discussions with the experts from the industry, if any norms with regard to the economic size can be fixed in respect of the manufacture of commercial vehicles and passenger cars. Almost everyone agreed that in so far as commercial vehicles were concerned there was nothing like an economic size and that these could be produced economically in small or large numbers as may be necessary. We were informed that even a unit producing 1,000 commercial vehicles a year can achieve economic costs provided that suitable raw materials and ancillaries were available. As regards passenger cars, opinion was divided, and while firm views were not expressed we gathered the impression, that a unit manufacturing about 50,000 cars a year could be considered to be economic and that production of cars is substantially smaller numbers was not likely to lead to economies of cost. As matters now stand, it is not possible to indicate whether any of the units manufacturing commercial vehicles

could be considered uneconomic while all the units manufacturing passenger cars would be considered to be smaller than required for the economic size. The reasons for such a situation are historical since each of the units manufacturing passenger cars started from assembly operations at which stage the question of an economic size for manufacture is not of much relevance. We are therefore of the view that until the economic level of production is reached by the present manufacturers it would not be advisable to license any additional unit. One of the suggestions that came up before us was that the experiment of setting up a new unit in the field of manufacture of passenger cars may be tried with a view to promoting additional internal competition, in the expectation that the new unit would not be subject to the same handicaps as regards costs and quality as are being faced by the existing units. If such a step were to be taken it would be necessary to set up an economically viable unit for which the initial costs of imported plant and machinery would be tens of crores of rupees. Granting that such a unit would be more fortunate in its performance and achievements than others and that it would push out of the market some of the existing units, the imported plant and machinery of the units so rendered defunct would go waste and constitute an unnecessary burden on the national economy. There is also no assurance—in fact there is no possibility—that such a new unit can be set up with entirely indigenous resources based on indigenous standards and specifications. It will therefore be necessary not only to import machinery from abroad but also to enter into collaboration with one or more foreign organisations or to persuade foreign units with substantial equity participation to set up such a manufacturing organisation in India. There is again no guarantee that such a unit would not be subject to the same economic stresses as beset the units already in existence. We do not therefore consider that the proposition of setting up a new unit in addition to those already in existence is in the least advisable or desirable. It has also been a matter for consideration whether compulsory merger of weaker and inefficient units should be made into stronger ones. The comprehensive study of the industry

that we have made as well as the cost analysis undertaken by us for the purposes of recommending prices has led us to the conclusion that with minor variations of degree almost all the units are subject to the same weaknesses and handicaps and it cannot be categorically said that a particular unit is strong and efficient and another one weak and inefficient. Our analysis which has been more amply narrated in the other report which we are forwarding to the Government on prices has shown that where the product is credited with a higher degree of quality the costs of production is high; on the other hand if economies of costs have been achieved there was a certain degree of dissatisfaction with the quality of the product. Almost all the units therefore are more or less in a similar position and it cannot be said that any particular unit is relatively weak or inefficient. Even if such a classification could be made we have no ground to suggest that any scheme of mergers should be pursued, least of all to propose compulsory merger, since there is no provision in the law under which such a step can be taken even if it is assumed that it is necessary.

5.8. Collaboration agreements :

5.8.1. The Commission had in its Report of 1953 observed that all the firms with a manufacturing programme were tied up with foreign manufacturers; while this was necessary in the first few years to the development of the automobile manufacture it was in the national interest that they should become independent of their foreign associates within as short a period as possible. It had added that this would however require highly qualified and trained technical officers including designers who would prepare their own designs and build up their own models and that they should set up designing and research sections of their own and introduce schemes for the training of apprentices. This recommendation was followed up in 1956 by further observations which related mostly to agreements relating to the assembling of vehicles in India. It was advocated that the agreements should provide for some general undertaking on the part of foreign firm giving due regard to the repercussions which changes in designs and specifications may have on the production programme of their associates in India and make suitable comprehensive arrange-

ments to the extent practicable to cushion the impact. Secondly the deletion allowance obtained by the Indian manufacturers should be specified on the basis of a detailed schedule a matter on which no specific principles were being followed. Thirdly, it was advocated that the commitments of the foreign firms with regard to the facilities required for the manufacture in India should be spelt out in as great a detail as possible. This would include the provision of technical assistance and foreign technological personnel, arrangements for the training of Indian personnel abroad, assistance in procuring machinery, equipment and scarce raw materials and in securing the necessary collaboration from manufacturers of proprietary components and holders of foreign patents. It was suggested at the end that these considerations should be borne in mind whenever there were opportunities to revise the existing agreements.

5.8.2. Much more recently, the Government felt the need for laying down the guide lines regarding the utilisation of indigenous know-how and the types of cases in which foreign collaboration may be allowed. A Committee under the Chairmanship of Dr. Ramaswamy Mudaliar was therefore set up to go into all aspects of the matter. The Committee's report, which was generally accepted by Government in their Resolution dated 16th September 1967 had pointed to the gap between India and the advanced countries in the matter of investments in research and development and for this reason it would not be advantageous for Indian industry, which has diversified its base in many directions, to divorce itself from the mainstream of technological advance. On the other hand it was agreed that there were many industries which had reached the point of saturation of technical improvements and ran no risk of obsolescence. In these instances complete independence from foreign know-how or at least outright purchase thereof could be advocated.

5.8.3. Even in cases where developing technologies play a crucial part and where no abrupt discontinuance of the flow of technical expertise can be envisaged, it would be desirable to think in terms of a realistic programme of substitution of indigenous technique and know-how. It

seems to us therefore that when Government are approached in the future for renewal of the existing collaboration agreements, they may think in terms of a reasonable time limit for the operation of the renewed or revised agreements, thus providing a spur to speedy assimilation of technical advance and improvements of product design with a view in particular to utilisation of indigenous materials and knowledge.

5.8.4. The arguments sometimes advanced regarding the undue outflow of foreign exchange on this account cannot be taken too seriously because as things are, the largest outflow in respect of automobile industry is for payment of imported raw materials and semi-finished items, which on an average is about as 30 crores excluding the requirements of ancillary industry as against a crore or two of rupees for royalties and other technical research arrangements. Even so, it may be worthwhile considering the possibility of making the payment of the dues of Indian firms to foreign principles and collaborators to the maximum extent in rupees. This is a point which may be further explored by Government and the Reserve Bank of India.

6.1. In 1956, the annual assembling capacity on single shift basis reported by the six manufacturers was 49,800 vehicles. Premier was just about to increase its assembling capacity to 18,000 units and the assembling capacity in the country was adequate to meet the demand as estimated by the Commission. Subsequently, the Technical Sub-Committee of the *Ad Hoc* Committee estimated in 1961 the production capacity at 20,000 cars, 28,000 commercial vehicles and 5,500 jeeps and jeep type vehicles making a total of 53,500. As the requirements by the end of the Second Five Year Plan, exclusive of 10,000 low cost cars, were placed at 1,00,000 an additional capacity of 10,000 cars, 4,500 jeeps and station wagons and 32,000 commercial vehicles was proposed. These estimates were based on double shift working of most of the machinery. The *Ad Hoc* Committee recommended that the additional capacity to be created during the Third Plan should be secured through expansion and diversification of the existing units.

6.2. The following table shows the present installed capacity as reported by the seven manufacturers to the Commission. Corresponding figures given by D.G.T.D. are also shown against each.

TABLE 2
Capacity of the Automobile units

Name of the Unit	As furnished	
	by pro- ducers (in numbers)	by D.G.T.D. (in numbers)
1. Hindustan Motors Ltd.		
Ambassador cars	38,400	15,000
Bedford trucks	10,500	10,000
2. Premier Automobile Ltd.		
Fiat cars	7,200	9,000
Commercial vehicles	7,500	9,000
3. Standard Motor Products of India Ltd.		
Standard Herald	3,400	6,000
1-tonne truck	1,000	1,000
4. Ashok Leyland Ltd.		
Comet Chassis	5,000	5,000
Heavy vehicles	600	..
5. TELCO		
Commercial vehicles	24,000	20,000
6. Mahindra & Mahindra Ltd.		
Jeeps	8,000	} 12,000
Light trucks	2,000	
7. Bajaj-Tempo Ltd.		
3- and 4-wheelers	4,000	3,000
TOTAL	111,600	90,000

Thus, the total installed capacity is 1,11,600 (cars 49,000, jeeps and jeep type vehicles 10,000, commercial vehicles 52,600). As against this, the D.G.T.D. has reported a total capacity of 90,000 (cars 30,000, jeeps and jeep type vehicles 12,000, commercial vehicles 48,000).

6.3. At the 1953 inquiry the Commission assessed the assembling capacity of Hindustan Motors both for cars and commercial vehicles together at 18,000 vehicles per annum on single shift basis and the same capacity was adopted at the 1956 inquiry also. The *Ad Hoc* Committee assessed in 1960 the manufacturing capacity of this unit at 10,000 Ambassador cars and 6,000 Bedford trucks. The production of cars by Hindustan Motors from 1951 to 1959 was as follows:

Year	Ambassador cars	Trucks	Total
1951	2161	369	2530
1952	1185	1169	2354
1953	1847	1034	2881
1954	2628	1118	3746
1955	4868	2360	7228
1956	5781	2712	8493
1957	5086	1137	6223
1958	4799	1431	6230
1959	5745	4383	10128

Considering the performance of this unit at the time when the Jha Committee went into the question, its assessment regarding capacity appears to have been justified. However, since 1960 the production of cars by this unit went up by leaps and bounds except for a fall in 1963 and

stands now at about 20,000 cars per annum as the following figures would show:

Year	Ambassa- dor cars	Trucks	Total
1960	9,217	7,080	16,297
1961	11,056	4,096	15,152
1962	13,438	4,947	18,385
1963	8,621	5 15	14,436
1964 .			
1965	15,558	4,891	20,449
1966	19,469	4,101	23,570
1967 (Nine months)	15,140	1,120	16,260

As may be seen from table 2 above, the D.G.T.D. has reported the installed capacity for cars for this unit as 15,000 and 10,000 trucks. A question was raised at the public inquiry by some manufacturers as to how such large capacity was allowed to be built by one unit at the cost of the other units. The representative of the unit stated that from the very beginning the capacity of this unit was eight cars per hour which works out to about 38,400 cars per annum on double shift basis. The Development Officer present at the inquiry stated that at no time was any physical assessment of the capacity of the unit made and that the figure of capacity of 15,000 furnished by the D.G.T.D. was based on broad judgement. In the case of Standard Motors too the capacity has not so far been fixed. The D.G.T.D.'s representative pointed out that under the Industries (Development and Regulation) Act, 1951 it was not obligatory to specify the licensed capacity. From the legalistic point of view this may be correct, but in view of the fact that not only has the vehicle production to be planned in the country over a number of units but also as foreign exchange for the import of components and raw materials as well as for the purchase of plant and machinery has to be

allotted equitably to the various units, it appears very necessary to us that the recognised capacity should be technically assessed. This is all the more desirable in view of the fact that it has been done in the case of another unit, namely, Premier Automobiles even though it had also started production before the commencement of the Industries (Development and Regulation) Act and it was not obligatory for the capacity to be mentioned at the time of registration.

6.4. Considering the fact that the unit has produced about 20,000 cars annually, the estimate of capacity by the D.G.T.D. at 15,000 cars per year appears to be erroneous. Each vehicle has a certain amount of import content in the form of finished and semi-finished components and the value of imported raw material alone is more than 20 per cent of the total cost of the manufacture of an Ambassador car excluding assembly charges. Import licences must have been made available to the unit for the manufacture of these vehicles to the extent of their actual performance. Recently, the unit has also been allowed to import at a c.i.f. value of about Rs. 2 crores a battery of new machines for cylinder block line for Ambassador cars for the capacity of eight blocks per hour which works out to 38,400 blocks on double shift basis. The unit has also informed us that it has taken up the manufacture of Bedford full forward control light petrol commercial vehicle of wheel base 120" and that the vehicle has been in production since August 1967. The D.G.T.D. on the other hand has stated that the request of the unit for manufacture of such a vehicle was not allowed. It is difficult therefore to understand as to how such contradictions and disparities have come about which do to a certain extent give room to the kind of suspicions expressed at the public inquiry to which reference has been made earlier.

6.5. The *Ad Hoc* Committee had reported that the majority of the automobile factories were not equipped with machinery which was either well balanced or capable of most economic production and that this was particularly true of the two oldest units, namely, Hindustan Motors and Premier Automobiles. As indicated earlier, the imbalance continues at least in the case of Hindustan Motors.

We, therefore, recommend that while issuing licences for expansion of capacity, care should be taken to see that capacity as indicated by us in paragraph 6.9 is well-balanced and is capable of economic production.

6.6. We were informed at the public inquiry by the D.G.T.D.'s representative that import licences for raw materials are given on the actual performance in the previous year irrespective of the licensed or installed capacity. Therefore, under this procedure, a unit which manages to produce more passenger cars than its licensed capacity would be able to secure additional licences and go on increasing its production. This, in our view, is not desirable as it would lead to diversion of scarce resources for production of passenger cars and also defeat the purpose of planned development of the industry. We, therefore, consider that it would be desirable to relate the issue of import licence for raw materials to licensed capacities also so that within the allotted foreign exchange a unit which desires to expand production might do so by increasing the indigenous content. This would accelerate the pace of indigenisation. We, therefore, recommend that the issue of licences for import of raw materials should be related to both production and capacity, the ceiling being the licensed capacity of the unit concerned.

6.7. No effective planning of an industry is possible unless the licensed and installed capacities of the unit are clearly defined. This is all the more important in the case of industries which have to depend upon import at least to some extent. We, therefore, recommend that Government should specify the licensed capacities of each of the units in the automobile industry. Further, the D.G.T.D. should undertake a technical assessment of the machinery installed in each unit and determine their installed capacities accurately.

6.8. The installed capacities for Fiat cars and commercial vehicles furnished to us by Premier Automobiles are 7,200 and 7,500 nos. respectively. While the aggregate capacity of 14,700 vehicles need not be revised, redistribution of this capacity between the two types of vehicles taking into account their trends of production is desirable.

TELCO's representative claimed a capacity of 24,000 commercial vehicles at the public inquiry and we are inclined to agree with this, considering their recent performance in production. Mahindra & Mahindra have accepted the capacity of 12,000 for jeeps and jeep type vehicles and we are inclined to adopt this figure in consideration of the plant and equipment installed by the unit.

6.9. As a result therefore of the claims made by the units, the capacities judged by our Cost Accounts Officers and the discussions held both with the individual units and also with the D.G.T.D. and the information conveyed to us at the public inquiry we decided to adopt the following installed capacities for various manufacturers until fresh assessment is made in accordance with our recommendations in the previous paragraph.

<i>Passenger cars</i>	<i>Nos. per annum</i>
Hindustan Motors	24,000
Premier Automobiles	9,000
Standard Motor Products	5,000
Sub-total	38,000
<i>Jeeps and jeep type vehicles</i>	
Mahindra & Mahindra	12,000
	12,000
<i>Commercial vehicles</i>	
(i) Hindustan Motors	15,000
(ii) Premier Automobiles	5,700
(iii) Standard Motor Products	1,500
(iv) Ashok Leyland—Comets	6,800
Heavy vehicles	600
(v) Tata Mercedes Benz	24,000
(vi) Bajaj-Tempo Ltd.	4,000
Sub-total	57,600
TOTAL	107,600
<i>Engines for commercial vehicles</i>	
Simpson & Co.	8,000

7.1. The following table shows the number of vehicles produced since 1957:
7. Production

TABLE 3

Production of automobiles in India during the last decade

(In numbers)

Year	Passenger cars	Jeeps	Commercial Vehicles	Total	Engines* only
1957 . .	12,203	3,450	17,109	32,762	3,011
1958 . .	8,103	3,134	15,652	26,889	3,819
1959 . .	11,993	3,841	21,036	36,870	7,841
1960 . .	19,097	4,532	28,435	52,064	9,249
1961 . .	21,663	5,959	26,810	54,432	9,761
1962 . .	23,326	6,909	27,581	57,816	7,653
1963 . .	15,711	7,815	28,769	52,295	7,993
1964 . .	23,227	10,300	33,607	67,134	7,625
1965 . .	24,790	10,483	37,403	72,676	7,847
1966 . .	27,597	9,807	35,208	72,612	6,706
1967 . . (Jan.-Sept.)	24,909	4,712	23,221	52,842	2,238

*These are engines manufactured by Simpson & Co, Ltd., Madras suitable for automobiles.

7.2. It will be seen from the above table that production of automobiles has increased from 32,762 units in 1957 to 72,612 in 1966. There was a set-back in 1958 due to foreign exchange crisis and in 1963 due to Chinese aggression which necessitated the curtailment of passenger car production. In 1966 and in the first nine months of 1967 however, there has been an appreciable increase in the output of passenger cars but a decline in that of jeeps as well as commercial vehicles. It is interesting to note, however, that production of passenger cars increased from 12,203 in 1957 to 27,597 in 1966, while in the case of commercial vehicles production increased from 17,109 to 35,208 during the same period. During the nine months ending September 1967 the production of passenger cars and commercial vehicles was 24,909 and 23,221 respectively. Thus for the first time since 1957 the output of passenger cars has exceeded that of commercial vehicles.

7.3. The current recession seems to have hit the production of commercial vehicles whereas that of passenger cars does not seem to have been affected at all. The production of jeeps showed a steady increase from 3,450 in 1957 to 7,815 in 1963; then jumped to 10,300 and 10,483 in 1964 and 1965 respectively owing to defence demand. It declined slightly to 9,807 in 1966 and appreciably to 4,712 in the first nine months of 1967, owing among other things to a decrease in defence offtake. On the whole the production of automobiles showed an increase of 121 per cent between 1957 and 1966 (passenger cars 126 per cent, jeeps 184 per cent and commercial vehicles 106 per cent).

7.4. The production of diesel engines increased steadily from 3,011 in 1957 to 9,761 in 1961; thereafter it has decreased. It was 6,706 in 1966 and for the first nine months of 1967 it was 2,238. The decline in production of commercial vehicles by Hindustan Motors and Premier Automobiles has affected the demand for these engines.

7.5. Unit-wise details of production is given in Table Nos. 4 and 5 based upon the information supplied by the producers.

TABLE 4

Production of passenger cars (including jeeps) during 1957 to 1967 as furnished by the producers

Name of the Producer	(In numbers)									
	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966 Jan.-Sept., 1967
1. Hindustan Motors Ltd.	5,086	4,799	5,745	9,217	11,056	13,438	8,621	15,351	15,558	19,469 15,140
2. Premier Automobiles Ltd.	4,866	1,842	4,459	6,516	7,197	6,247	3,750	3,868	5,673	7,030 7,628
3. Standard Motor Products Ltd.	2,251	1,462	1,789	3,364	3,410	3,641	3,340	4,008	3,559	1,098 2,141
4. Mahindra & Mahindra Ltd.	3,450	3,134	3,841	4,532	5,959	6,909	7,815	10,300	10,483	9,807 4,712
TOTAL	15,653	11,237	15,834	23,629	27,622	30,235	23,526	33,527	35,273	37,404 29,621

TABLE 5

Production of commercial vehicles during 1957 to 1967 as furnished by the producers

(In numbers)

Name of the producer	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	Jan-ber 1967
1	2	3	4	5	6	7	8	9	10	11	12
1. Hindustan Motors Ltd.	1,137	1,431	4,383	7,080	4,096	4,947	5,815	4,940	4,891	4,101	1,120
2. Premier Automob-les Ltd.	5,944	4,219	5,409	6,347	5,528	5,387	6,316	8,749	9,152	4,825	2,233
3. Standard Motor Products Ltd.	..	..	..	No production	..	..	..	..	71	979	301
4. Ashok Leyland Ltd.	861	1,092	1,394	2,018	2,344	2,834	2,730	3,726	4,280	3,859	3,632

	1	2	3	4	5	6	7	8	9	10	11	12
5. TELCO Ltd.		8,019	7,730	7,880	9,665	12,000	12,196	12,424	14,367	17,328	18,900	13,860
6. Mahindra & Mahindra		1,148	980	1,435	2,398	2,045	1,367	596	137	..	982	938
7. Bajaj-Tempo Ltd.		..	200	535	927	797	850	888	1,688	1,681	1,562	1,137
TOTAL		17,109	15,652	21,036	28,435	20,810	27,581	28,769	33,607	37,403	35,208	23,221
8. Simpson & Co. Ltd. (Engines)		3,011	3,819	7,814	9,249	9,761	7,653	7,993	7,625	7,847	6,706	2,238

7.6. It would be observed that despite the increase in overall production, no clear trend is to be found in the production of any unit except that of TELCO which, has had a continuous and steady increase throughout. It was the result of a planned and phased programme. The trend in the car production of Hindustan is on the whole upward except for a severe setback in 1963 which has been common with Premier. Premier's production suffered a big decline in 1958 due to foreign exchange difficulties in view of its relatively low indigenous content at that time. Thereafter the increase continued till 1962 when a decline started which was accentuated in 1963. Only a slight improvement was registered in 1964. Since then the upward trend has continued. Ashok Layland, also like TELCO, shows a steady increase since 1957 except for a small fall in 1963. Hindustan which reached a level of 7,080 commercial vehicles in 1960, suffered a severe decline in 1961 and thereafter despite temporary increase in 1962 and 1963 has a declining trend. Its production in the first nine months of 1967 is less than 30 per cent of even the low level of 1966. The trend of production of commercial vehicles of Premier Automobiles is rather erratic—a fall in 1958, and increased production in 1959-60, again a fall in 1961 and 1962 and a rising trend from 1963-65 (presumably due to demand of the Defence Department) and a severe fall in 1966 and the first nine months of 1967. Bajaj-Tempo, despite a fall in 1961, shows a rising trend which was accentuated in 1964. Except for a slight setback in 1958, Mahindra & Mahindra shows a continuous rising trend in the production of jeeps which exceeded the Third Five Year Plan target of 10,000 as early as 1964, as a result of defence demand. Recession seems to be responsible for the decline in 1967. It is interesting to note that the recent recession has affected the production of all units except those manufacturing heavy duty vehicles.

7.7. While the production of commercial vehicles increased by 23.9 per cent between 1960 and 1966 that of passenger cars excluding jeeps went up by 44.5 per cent during the same period. This was due to the greater demand for passenger cars than for commercial vehicles and is in line with the tendency in the rest of the world also. The incidence

of increase in the case of other countries which manufacture automobiles is shown in Table 1A, and break up for commercial vehicles and passenger cars is available for about half the number of countries for both years. In every case without exception, greater increase in the case of passenger cars has been registered than for commercial vehicles. The proportion of commercial vehicles produced in 1966 to the total number of automobiles produced varies from 6.0 per cent in the case of Italy to 78.2 per cent in the case of U.S.S.R. The proportion for India was 48.7 per cent. The only other countries which had a higher percentage for commercial vehicles than for passenger cars are Japan and U.S.S.R. Of the developing countries only one viz., Brazil manufactures automobiles and even in this case the proportion of commercial vehicles to passenger cars is lower than that of India. Of the total capacity available for automobile production much less has been utilised in India for passenger cars than was warranted by the demand or the trend noticeable for the car producing countries as a whole. Owing to Government policies which restricted the production of passenger cars on the one hand but encouraged that of commercial vehicle the demand for passenger cars continued to accumulate and even now remains largely unsatisfied; the existing backlog of demand would need the full production of the country for a period of three years to satisfy. As against this huge backlog of demand for passenger cars the supply of commercial vehicles is much easier and supplies can generally be made off the show-room floor.

8.1. In a manufacturing unit like an automobile factory where the ultimate product is made up of thousands of components, parts, assemblies and sub-assemblies, some of which are manufactured in the plant itself and some bought out from the ancillary industries, the assessment of capacity is bound to be complex.

8.2. All the units except Mahindra & Mahindra have reported varying degrees of under-utilisation of capacities. The figures are likely to increase much more for 1967 in view of the fall in production due to recession in the case of jeeps and commercial vehicles. Mahindra & Mahindra

has stated that despite variations from time to time in daily production due to a number of reasons particularly delay by vendors or in the receipt of imported components and since 1964 labour trouble, there was no loss in overall production in last five years as temporary setbacks in production were made up by increased production later on and thus during the last five years there was no under-utilisation of capacity in its plants.

8.3. The following table gives the figures of utilisation of capacity of passenger cars and commercial vehicles based on the figures of capacity adopted by us.

TABLE 6
Utilisation of Capacity in 1966

Name of the producer and type of vehicle	Installed capacity (in nos.)	Production in 1966 (in nos.)	Utilisation of capacity (%)
1	2	3	4
A. Passenger Cars			
<i>Hindustan Motors</i>			
Ambassador	24,000	19,469	81
<i>Premier Automobiles</i>			
Fiat	9,000	7,030	78
<i>Standard Motor Products</i>			
Herald	5,000	1,098	22
B. Jeeps and jeep like vehicles			
Mahindra & Mahindra	12,000	10,789	90

1	2	3	4
C. Commercial Vehicles			
<i>Hindustan Motors</i>			
Bedford	15,000	4,101	27
<i>Premier Automobiles</i>			
Dodge/Fargo	5,700	4,825	85
<i>Ashok Leyland</i>			
Comet & Heavy duty vehicles .	7,400	3,859	52
TELCO—TMB Vehicles .	24,000	18,900	79
<i>Bajaj-Tempo</i>			
3-wheeler & 4-wheeler vehicles .	4,000	1,562	39
<i>Standard Motor Products</i>			
1-tonne truck	1,500	979	65

It will be seen from the above table that under-utilisation of capacity exists in all units, less in some and very high in others. The producers have attributed this to inadequacy of licences for components, raw materials, tools and spares, non-receipt of licences in time, inadequate facility for replacement of machines, non-availability of local components, very low allotment of foreign exchange and a few other reasons. The under-utilisation has been accentuated in recent months by the prevailing recession in the engineering industry. Some special reasons are also advanced by some of the producers such as sales resistance due to unsuitable engines fitted into the truck (Premier and Hindustan), shortage of power supply (Standard and Ashok), machinery and equipment under installation and being rearranged and reset (Ashok and Bajaj), labour unrest, absenteeism and communal trouble (TELCO). We tried to elicit information on this question and asked the producers whether they had Industrial Engineering Departments and whether performance standards were established for (a) man-hour utilisation, (b) machine-hour utilisation and (c) material

utilisation. We also asked them to indicate the performance indices for various sections or departments for man-hour, machine-hour and material utilisation. From the replies we find that though all the manufacturing units have the means of establishing performance standards, detailed information about the shopwise indices has not been furnished.

8.4. Bajaj-Tempo and Simpson & Co. have neither standards for machine-hour utilisation nor standards for man-hour utilisation and therefore there appears to be no basis for assessing their capacity or utilisation of capacity except by experience or estimation. Of the remaining units, all except Premier Automobiles claim to have standards for machine-hour utilisation and thus have a basis for calculating the capacities of various departments. Premier Automobiles has reported that the standards were being calculated. The performance indices for various departments would have provided valuable data to determine the idle capacity in various sections and thereby the imbalances in capacities. However, none of the units has furnished this information. All the units claimed to have more or less balanced capacities except Hindustan Motors but in the absence of details, no useful conclusions can be drawn. An important point in this context is whether an absolute balance of capacities in all departments is at all essential. In our view it is not. Obviously where a unit is manufacturing items the demand for which can be supplemented with supplies from vendors or where during slack time it is possible to take on other work such departments could not be treated as bottlenecks or encumbrances for the determination of overall capacities. Typical examples of this type are the foundry, forge shop, ancillary component manufacturing sections, etc. Broadly speaking, balanced capacities for chassis, body panels, engine, transmission, front and rear axles, complete assembly, interior fittings, painting and finishing should be taken to determine the plant capacity. All units have these facilities and at present it is not possible to supplement the demand for these vital facilities from vendor services. Any bottleneck in these will determine the limiting plant capacity. While on this subject it is relevant to bear in mind that plant capacity is not a static quantity. It is natural for manufacturers

during the process of revamping or in making additions to replace old equipment with new equipment which is superior or has a higher capacity. Thus it is to be expected that in course of time the capacity should keep on increasing as old machines are replaced by new and additions and alterations to plant and equipment are made. Plant capacities may also change due to changes in design or changes in materials and methods. One has, therefore, to keep an open mind on this subject of utilisation of capacity and a certain degree of flexibility is to be expected in all plants.

8.5. Gross imbalance in the capacities of various units, sections or departments of a plant—particularly where shortage of capacity cannot be supplemented with vendor services and excess capacity utilised for other work—leads to idle plant and equipment which has a bearing on cost. It is therefore essential that the manufacturers should have up-to-date information on this subject. In view of the doubt raised at the public inquiry about the circumstances in which one unit was permitted to build up capacity at the cost of other, we recommend that the D.G.T.D. should make an immediate assessment of the capacities of Hindustan Motors and Standard Motor Products for passenger cars and specify these in the industrial licences as has been done in the case of Premier Automobiles.

8.6. On the subject of optimum utilisation of capacity, manufacturers and other interests have expressed differing opinions. We are of the opinion that in a plant where the ultimate product is one but where numerous operations have to be carried out on several machines a capacity utilisation index of 90 per cent should be expected.

CHAPTER III

DOMESTIC DEMAND

9. Demand

9.1. Demand for automobiles has continuously increased within the last decade.

9.2. Appendix IX shows the vehicle population in India from 1955-56 to 1965-66. The variation in different kinds of registered vehicles in each year over that of the previous year are shown in table 7 below.



TABLE 7

Increases in the number of vehicles registered (on the road) during a year over the previous year as on 31st March of the year

		(In numbers)									
		1956- 57	1957- 58	1958- 59	1959- 60	1960- 61	1961- 62	1962- 63	1963- 64	1964- 65	
(i) Private Cars (including jeeps)	. . . . .	15,646	23,812	23,349	12,126	25,114	26,111	33,579	11,303	37,387
(ii) Taxis	. . . . .	709	(-)-702	1,609	2,253	2,476	3,957	2,173	1,748	2,221
(iii) Sub-total (i+ii)	. . . . .	16,355	23,110	24,958	14,379	27,590	30,068	35,752	13,051	39,608
(iv) Buses	. . . . .	(-)-8,046	(-)-2,820	12,431	5,648	3,118	2,768	3,000	3,953	3,957
(v) Trucks	. . . . .	4,289	9,725	14,514	9,046	10,978	21,447	26,312	8,773	17,659
(vi) Others	. . . . .	4,234	11,336	814	3,632	(-)-10	8,480	9,954	4,733	5,132
(vii) Sub-total (iv to vi)	. . . . .	477	18,241	27,759	18,326	14,086	32,695	39,266	17,459	26,748
(viii) Grand total (iii+vii)	. . . . .	16,832	41,351	52,717	32,705	41,676	62,763	75,018	30,510	66,356

9.2.1. It would be seen from this table that there has been a steady increase in the number of vehicles registered. The index for the number of vehicles registered during the succeeding years of the Second and Third Plan periods (base 1955-56 = 100) rose to 146 in 1960-61 and 209 in 1964-65 as will be seen from table 8 below.



TABLE 8

Index number of vehicles on road
(Base year 1955-56)

Type of vehicle	Years									
	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65
1. Private cars (including jeeps) . . .	100	108	121	133	140	153	167	185	191	211
2. Taxis . . .	100	105	100	111	125	141	167	181	193	207
3. Sub-total (1+2) . . .	100	108	119	132	139	152	167	185	191	211
4. Buses . . .	100	83	77	103	116	122	128	135	143	152
5. Trucks . . .	100	104	112	124	132	141	159	181	188	203
6. Others . . .	100	127	198	203	226	226	280	342	372	405
7. Sub-total (4 to 6) . . .	100	100	110	126	136	143	162	183	193	208
8. Grand total (3+7) . . .	100	104	115	129	137	146	164	184	192	209

9.3. The Tariff Commission in 1956 had estimated the demand for 1960-61 at 65,000 vehicles (20,000 passenger cars, 5,000 jeeps and 40,000 commercial vehicles). The following table compares these estimates with the actual increase in the real demand as shown in table 9 below:

TABLE 9
Actual increase in real demand

	Passenger cars	Jeeps	Commercial vehicles	Total
Commission's estimates .	20,000	5,000	40,000	65,000
Increase in vehicle population in 1960-61 over 1959-60	21,592	5,998	14,086	41,676
Difference	(+)1,592	(+)998	(-)25,914	(-)23,324

These figures reveal that the actual demand for passenger cars and jeeps exceeded the Commission's estimates, while the total demand fell mainly due to the failure of demand for commercial vehicles to come up to the anticipated extent.

9.4. According to the Committee on Transport Policy and Co-ordination, there were 34,411 buses and 81,888 trucks at the commencement of the First Five Year Plan and by 1960-61 their number had increased to 57,049 and 171,045 respectively. (These figures do not tally with those furnished by the Ministry of Transport reproduced in Appendix IX). Thus over a decade there was an increase of nearly 70 per cent in buses and of about 100 per cent in trucks. This increase has been due to the tremendous growth in road transport both in goods as well as passenger traffic during the period of the first two plan periods as shown in the following table 10.

TABLE 10

Increase in goods and passenger traffic during the last 15 years

Mode of transport	Year					
	1950-51	1955-56	1960-61	1961-62	1962-63	1963-64 1964-65
I. Goods traffic						
	(Million tonne Kilometers)					
Rail	44,117 (100)	59,576 (135)	87,680 (199)	91,218 (207)	100,693 (228)	106,841 (242) 106,570 (242)
Road	5,500 (100)	8,950 (163)	17,400 (316)	21,000 (382)	25,000 (454)	27,000 (491) 31,000 (564)
Total	49,617 (100)	68,526 (138)	105,080 (212)	112,218 (226)	125,693 (253)	133,841 (270) 137,570 (277)
II. Passenger traffic						
	(Million passenger Kilometers)					
Rail	66,517 (100)	64,200 (94)	77,665 (117)	81,885 (123)	83,991 (126)	88,588 (133) 93,489 (141)
Road	23,133 (100)	31,477 (136)	57,000 (246)	59,000 (255)	65,000 (281)	69,000 (298) 76,000 (329)
Total	89,650 (100)	93,877 (105)	134,665 (150)	140,885 (157)	148,991 (166)	157,588 (176) 169,489 (189)

NOTE.—Figures within brackets indicate indices taking 1950-51 as base year.

9.5. Protection to the automobile industry was granted for ten years on the recommendation of the Tariff Commission in 1956. The Commission had not made any mid-term review of the industry and as such did not estimate the demand for the Third Plan period. Demand for automobiles was however estimated by the Planning Commission and by the *Ad Hoc* Committee in respect of this period. Table 11 shows these estimates including those of the Commission and also the actual production during the periods for which the estimates were made.



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TABLE 11

Estimates of demand made by different bodies and the actual achievement

(In numbers)

Sl. No.	Name of the estimating body	Period	Estimates			Production			Achievement indicated by plus (+) or minus (-)			Total		
			Cars	Jeeps	Commercial vehicles	Cars	Jeeps	Commercial vehicles	Cars	Jeeps	Commercial vehicles	Cars	Jeeps	Commercial vehicles
2		2	3	4	5	6	7	8	9	10	11	12	13	14
(3+4+5)														
1	Tariff Commission 1956 Report	1960-61	20,000	5,000	40,000	65,000	20,674	5,846	27,738	54,258	(+) 674	(+) 846	(-) 12,262	(-) 10,742
2	Sub Committee of the Ad Hoc Committee on automobiles. (Required annual average production).	1961-62					21,791	7,379	25,585	54,755	(-) 6,209	(-) 621	(-) 21,415	(-) 28,245
		1962-63					20,841	7,398	26,613	54,852	(-) 7,159	(-) 602	(-) 20,387	(-) 28,148
		1963-64	28,000*	8,000	47,000**	83,000								
		1964-65					18,077	9,148	29,452	56,667	(-) 9,923	(+) 1,148	(-) 17,548	(-) 26,323
		1965-66					24,188	9,835	36,864	70,887	(-) 13,812	(+) 1,835	(-) 10,136	(-) 12,113
3	Third Five Year Plan—Targets of demand—Planning Commission	1965-66	30,000	10,000@	60,000	1,00,000	25,029	10,385	35,337	70,751	(-) 4,971	(+) 385	(-) 29,337	(-) 33,923

* Includes station wagons and vans (1,000 Nos.) and heavy passenger cars (2,000 Nos.).

** Includes 11,000 passenger buses.

@ Includes station wagons also.

9.6. The estimates were as is obvious rather on the high side, particularly in the case of commercial vehicles.

9.7. Estimates of Future Demand :

9.7.1. We have received different estimates of demand for automobiles from producers and dealers, their respective associations and a few Government departments. A few expert bodies have also worked out estimates of demand from time to time. These estimates were made before the recession hit the economy. Of the eight producers, only Hindustan Motors and Premier Automobiles have furnished the estimates of demand for different kinds of automobiles, while TELCO and Bajaj have furnished for commercial vehicles only. Mahindra & Mahindra's estimates relate to jeeps and jeep type vehicles including utility wagons. Standard Motor Products has merely given the Planning Commission's estimates. Ashok Leyland and Simpson & Co. have expressed their inability to estimate demand for the next five years in view of the prevailing financial stringency and the recession.

9.7.2. According to Hindustan Motors, the demand for all automobiles will increase from 130,000 in 1966-67 (cars 60,000 and commercial vehicles 70,000) to 195,000 (cars 100,000 and commercial vehicles 95,000) by 1970-71, the demand for cars increasing by 10,000 and that for commercial vehicles by 5,000 year by year and during the last year of the Plan by 10,000. Its estimates of demand for cars are based on the anticipated rise in per capita income and growth in the car population and for buses on the anticipated growth of urban population. Increase in the estimates of demand for trucks is anticipated as a result of larger industrial and agricultural production augmented by the assumption that the taxation on operation of trucks would be reduced in due course. Premier Automobiles estimates the demand to increase from 84,500 (cars 32,000, jeeps 12,500 and commercial vehicles 40,000) in 1966-67 to 155,000 in 1970-71 (cars 60,000, jeeps 20,000 and commercial vehicles 75,000). Its estimates are based on the increase in the number of people in the higher income brackets and the heavy backlog of orders in spite of the requirement of Postal Deposit of Rs. 2,000/- per vehicle. For commercial vehicles its estimate is based upon the decentralisation of industries and the envisaged increase in agricultural output during the

Fourth Plan, which would necessitate an increased demand of 25 per cent per annum for the rapid movement of men and materials; but it has chosen to adopt only 20 per cent increase per annum because of the dampening features like crippling taxes, tight money position, inadequate hire-purchase facilities, high operation cost and poor road conditions. TELCO has furnished estimates for commercial vehicles at 40,000 in 1966-67 (trucks 31,000 and buses 9,000) reaching 72,000 (trucks 56,000 and buses 16,000) by 1970-71 on the basis of the total available load to be carried by different means of transport and the total agricultural and industrial production estimated by the Planning Commission for the Fourth Plan period. Mahindra & Mahindra estimates the demand for jeeps and jeep type vehicles (including utility wagons) at 25,000 by the final year of the Fourth Plan on the basis of an exhaustive study of demand and future trends including consultations with dealers, important customers and the study of plans of individual/States. It claims that its estimates have been accepted by the Planning Commission. Bajaj-Tempo's estimates for commercial vehicles are 46,000 in 1966-67 reaching to 90,000 by 1970-71, though the basis of its calculation has not been given. The Association of Indian Automobile Manufacturers has put the future demand at the end of the Fourth Five Year Plan at 155,000 (cars 60,000, trucks and buses 75,000, jeeps and jeep station wagons 20,000) subject to the condition that fiscal and transport policies of the Central and State Governments do not tend to act as further disincentives. The Federation of the Dealers Associations estimates the total demand by 1970-71 at 111,000 units (61,000 commercial vehicles and 50,000 cars). It has not formed any estimate for jeeps. Automobile Traders Association, Delhi, estimates the demand for cars to increase from 45,000 in 1966-67 to 55,000 in 1970-71 and for commercial vehicles from 38,500 to 60,000. The Indian Road Transport Development Association has assessed the demand for vehicles by projecting into the Fourth Plan period the increase which has taken place in the number of vehicles in the country during the last three plan periods in relation to the growth of income. It estimates the average number of vehicles to be produced annually during the Fourth Plan at 76,873 cars and jeeps and 63,846 commercial vehicles including buses.

9.7.3. The Federation of Indian Automobile Associations has furnished estimates of demand in respect of motor cars only. According to it cars have always been in short supply, but it is not possible to determine the past trends in the absence of up-to-date statistics and hence it is not possible to establish the quantum of unfulfilled demand. But on the assumption that the many adverse factors such as low priority given to cars as against commercial vehicles, the stringent foreign exchange position, the rate of increase in the motor car population to be the same as that during the first three years of the Third Plan, namely 6.2 per cent per annum, the increase at the end of the Third Five Year Plan is likely to be about 23,000 cars and that the replacement demand per annum would be about 30,000 vehicles assuming a 12 year life span for motor cars. Thus it puts the total demand for cars at 53,000 at the end of the Third Five Year Plan and on the same basis the demand at the end of the Fourth Plan at 75,000 (43,000 for replacement demand and 32,000 as additional demand). The All India Motor Union Congress has stated that the estimates of the Planning Commission have been unrealistic and that the target achieved is only fifty per cent in the last year of the Third Five Year Plan as a result of the inability of the manufacturers to produce more for want of licences for raw materials and the incapacity of the road transport industry to absorb additional vehicles due to the impossibility of operating trucks or buses economically as a result of Government policy. It considers that even the reported scaled down target of 75,000 commercial vehicles to be produced in the last year of the Fourth Five Year Plan is not likely to be achieved and it would be a remarkable achievement if 60,000 vehicles could be sold and not just produced taking into account the paucity of consumer finance.

9.7.4. According to the "Report of the Chief Engineers on Road Development Plan for India 1961-81" beginning from 1961-62 the long distance traffic is likely to go up to about 800 million tons in 1980-81, out of which the road transport will have to carry about 250 million tons. In addition to this, the feeder as well as the local (short distances) traffic which is also bound to increase substantially in the future would be about 500 million tons. To meet this traffic,

the required production of automobiles during the period from 1960-61 to 1980-81 has been estimated at 78,000 (10,000 passenger buses, 30,000 motor cars and cabs, 30,000 goods vehicles and 8,000 miscellaneous) in 1960-61, 134,000 (15,000 passenger buses, 45,000 motor cars and cabs, 60,000 goods vehicles and 14,000 miscellaneous) in 1965-66, 190,000 (20,000 passenger buses, 60,000 motor cars and cabs, 90,000 goods vehicles and 20,000 miscellaneous) in 1970-71; 263,000 (25,000 passenger buses, 75,000 motor cars and cabs, 135,000 goods vehicles and 28,000 miscellaneous) in 1975-76 and 370,000 (30,000 passenger buses, 100,000 motor cars and cabs, 200,000 goods vehicles and 40,000 miscellaneous) in 1980-81. The Working Group for Transport Equipment attached to the Planning Commission submitted a Report to the Planning Group on Machinery Industries in 1965 wherein it recommended the following targets for 1970-71.

1. Commercial vehicles (inclusive of approximately 20,000 passenger buses)

Pay load upto 3 tonnes	30,000	} 120,000
3 to 9 tonnes	85,000	
Over nine tonnes	5,000	

2. Jeeps and jeep station wagons 20,00

3. Cars 80,000

The estimate of commercial vehicles was based on two papers prepared on the subject by the Perspective Planning Division and Transport and Communications Division of the Planning Commission, according to which the volume of traffic on road would be about 70 million tonne kilometers by 1970-71. In arriving at this, the Group took into account the manufacturing facilities in the country and expansion programme of individual manufacturers, the use of heavy duty vehicles along with trailers to handle a large volume per trip, the experience of other countries and the advantages of light commercial vehicles to carry local and

feeder traffic, its lower initial cost, cheaper operating expenses, and also the possibility of utilising this for passenger traffic with a seating capacity of 10 to 15 passengers. The Group felt that if the price of passenger cars was reduced to some extent, the demand would be for about 100,000 vehicles by 1970-71 but with the prices at or about the prevalent levels the demand would be only 80,000. As regards the needs of the Defence department, 3-ton and 1-ton trucks, jeeps and motor cycles, the Group was of the opinion that the existing civilian manufacturers would be able to expand their capacity to meet the entire demand in respect of all the categories except 1-ton truck for which the emergency demand would not be met from the existing facilities in the country and therefore considered it necessary to establish a large size plant either in the civilian or in the defence sector to safeguard against this deficiency. The Planning Commission has placed the targets for production at the end of 1970-71 at 80,000 commercial vehicles, 60,000 passenger cars and 20,000 jeeps and station wagons, while the targets of capacities are 90,000, 50,000 and 25,000 respectively. The D.G.T.D. has not separately estimated the demand for various categories of vehicles during the Fourth Plan. We are informed that the targets for commercial vehicles were discussed at a joint meeting of the D.G.T.D., Planning Commission, Ministry of Industrial Development and Ministry of Transport when it was decided to include in the capacity licensed to Mahindra & Mahindra 5,000 numbers of $\frac{3}{4}$ ton commercial vehicle as falling within the category of commercial vehicles and accordingly, the capacity target for commercial vehicles was increased to 95,000 and the production target to 85,000. The break-up of the targets in the different categories of payload was fixed at 26,000 upto three tonnes, 65,000 three to nine tonnes and 4,000 over nine tonnes. We are informed that as the targets recommended by the Development Council for Automobiles, Ancillaries and Transport Industries were planned in the conditions existing prior to Pakistani aggression, these need drastic revision. The following table gives the various estimates of demand discussed above.

TABLE 12
*Summary of estimates of demand for vehicles furnished by
different interests*

(In '000 numbers)

Estimating body	Cars	Commer- cial vehicles	Jeeps	Total
1	2	3	4	5
1. Hindustan Motors Ltd.				
1966-67 . . .	60.0	70.0	..	130.0
1967-68 . . .	70.0	75.0	..	145.0
1968-69 . . .	80.0	80.0	..	160.0
1969-70 . . .	90.0	85.0	..	175.0
1970-71 . . .	100.0	95.0	..	195.0
2. Premier Automobiles Ltd.				
1966-67 . . .	32.0	40.0	12.5	84.5
1967-68 . . .	37.0	48.0	13.5	98.5
1968-69 . . .	54.0	56.0	15.0	125.0
1969-70 . . .	60.0	65.0	17.5	142.5
1970-71 . . .	60.0	75.0	20.0	155.0
3. Tata Engg. & Locomotive Co. Ltd.				
1966-67 . . .	..	40.0	..	40.0
1967-68 . . .	..	44.0	..	44.0
1968-69 . . .	..	50.0	..	50.0
1969-70 . . .	..	58.0	..	58.0
1970-71 . . .	..	72.0	..	72.0

1	2	3	4	5
4. Mahindra & Mahindra Ltd.				
1970-71 . . .	..	..	25.0	25.0
5. Bajaj-Tempo Ltd.				
1966-67 . . .	..	46.0	..	46.0
1967-68 . . .	..	57.0	..	57.0
1968-69 . . .	..	68.0	..	68.0
1969-70 . . .	..	79.0	..	79.0
1970-71 . . .	..	90.0	..	90.0
6. Association of Indian Automobile manufacturers				
1970-71 . . .	60.0	75.0	20.0	155.0
7. Automobile Traders Association, Delhi				
1966-67 . . .	45.0	38.5	..	83.5
1967-68 . . .	45.0	43.5	..	88.5
1968-69 . . .	46.0	49.1	..	95.1
1969-70 . . .	50.0	54.3	..	104.3
1970-71 . . .	55.0	60.0	..	115.0
8. Federation of Automobile Dealers' Association, Bombay				
1970-71 . . .	50.0	61.0*	..	111.0
9. All India Motor Congress, Delhi				
1970-71 . . .	..	60.0	..	60.0

*Includes jeep trucks.

1	2	3	4	5
10. Indian Road Transport and Development Association Bombay				
1966-67 . . .	49.2†	42.0	..	91.2
1967-68 . . .	63.0†	51.0	..	114.0
1968-69 . . .	76.9†	62.0	..	138.9
1969-70 .. .	90.7†	74.0	..	164.7
1970-71 . . .	104.5†	90.0	..	194.5
11. Federation of Indian Automobile Associations, Bombay				
1970-71 . . .	75.0	..	..	75.0
12. Report of the Chief Engineer son Road Development Plan for India (1961-81)				
1970-71 . . .	60.0††	130.0††	..	190.0††
13. Report of the Working Group for Transport Equipment—Planning Commission				
1970-71 . . .	80.0	120.0	20.0	220.0
14. Planning Commission—Draft Fourth Plan				
1970-71 . . .	50.0‡	95.0‡	25.0‡	170.0‡

†Includes jeeps.

††Required Production.

‡Indicates capacity targets.

9.7.5. The highest estimate of passenger cars is from I.R.T. D.A. closely followed by Hindustan Motors. The estimates of Chief Engineers and the Working Group for commercial

vehicles at 1,30,000 and 1,20,000 units by 1970-71 respectively are far ahead of other estimates. Among the producers, the estimates of Hindustan Motors for both passenger cars and commercial vehicles are the highest. The estimates of Premier Automobiles and TELCO for commercial vehicles are comparable, while those of Bajaj-Tempo are more liberal and nearer to the Planning Commission's targets. A majority of private interests, however put the demand of commercial vehicles between 60,000 and 75,000 at the end of the Fourth Plan. The majority estimate for passenger cars is round about 50,000 to 60,000 by 1970-71. The D.G.T.D. is of the opinion that guided by the targets in the Draft Outline of the Fourth Plan, it should be possible for the existing manufacturers of commercial vehicles both to diversify production into new lines of vehicles and to increase their existing production capacity to achieve the targets. So far as jeeps are concerned, the existing sole manufacturer has already been granted permission to increase the production capacity to reach the target. As regards passenger cars, any increase in demand could either be met by allowing the existing manufacturers to expand or by establishing a totally new viable unit. This will depend upon the relative advantages in terms of foreign exchange that has to be spent with particular reference to the price at which the vehicle could be manufactured. The D.G.T.D. has, however, expressed his doubt about the ability of any of the existing manufacturers to effect substantial reduction in manufacturing costs. According to him the targets could be met if they are allowed to increase capacities and their cost factor is ignored.

9.7.6. We had asked the dealers to state their views with regard to the trend of demand for different types of vehicles in the country. The picture of demand presented by them is one of optimism as most of them expect the demand to go up in the coming years provided the restrictive factors are removed. According to the Federation of Automobile Dealers Association, there has been a drop in the number of registration for new cars since the introduction of registration of orders with postal saving bank security deposit and the existing slackness in the demand for commercial vehicles is likely to slow down further when the full impact of the increase in price as a consequence of devaluation is felt.

Bedford and Fargo vehicles are available freely in the dealers show-rooms throughout India and Ashok Leyland in the northern region while in other regions the waiting list has substantially come down. The registration for TMB vehicles are not keeping pace with deliveries and the position might become worse when the full effect of the increase in price as a result of devaluation is felt. According to the Automobile Traders Association and a few other dealers, the demand as represented by registration to-day is not real. Many are repeat bookings to provide phased deliveries and a large percentage of demand reflected in the pending orders is artificial. According to one dealer the present demand is not a true indication of the actual requirements as a larger percentage of orders is booked with the aim of resale at a premium. As regards commercial vehicles it has been stated that the trend to-day is towards use of heavier vehicles of six to eight tonnes capacity and the most sought after vehicles are TMB and Leyland whose demand is increasing. Some dealers have stated that there will be a greater demand for Standards Cars when the 4 door model is introduced.

9.8.1. In Paragraph 6.9 we have adopted 38,000 as the present installed capacity of the three manufactures for passenger cars.

9.8.2. These capacities have been specified on the basis of two shift working which is considered as optimum utilisation of equipment in engineering industries of this class. In most departments where a high degree of precision and accuracy is essential a third shift is not considered desirable. There is a certain degree of interchangeability in the capacity for commercial vehicles and passenger cars and to the extent to which there is slackness in demand for commercial vehicles some capacity can be switched over to the manufacture of passenger cars. For limited periods it might even be possible to work an extra shift if it pays to do so. The production of cars in the first nine months of the current year was of the rate of about 35,000 cars per annum and we have no doubt that if the manufacturers have the necessary raw materials and components they could easily step up production to 40,000 cars or more per annum. The unsatisfied demand in respect of cars is substantial. The particulars of re-

gistrations for purchase and sales during the last six years are as follows :

TABLE 13
Registrations for purchase of motor cars and sales of cars

Year	Effective registration at the beginning of the year	Fresh registrations during the year	Total registration	Sales	Balance
1	2	3	4	5	6
1962 . . .	..	N.A.	N.A.	19,623	28,732
1963 . . .	28,732	44,595	73,327	11,563	61,764
1964 . . .	61,764	68,554	1,30,318	19,787	110,531
1965 . . .	110,531	26,999	1,37,530	24,973	112,557
1966 . . .	112,557	38,010	150,567	27,869	122,698
1967 . . .	122,698	12,499	135,197	24,909	110,288

REMARKS.—(i) Figures of registration and sales for the years 1962, 1963 and 1964 relate to only two units.

(ii) Figures in Columns (3) to (6) for the year 1967 are for only nine months.

9.8.3. The average production and sale of cars during the last six years have been nearly 22,000 leaving behind a significant backlog. Despite increased production there has hardly been any improvement in the clearance of the backlog since a large number of fresh registrations for purchase of cars is even now being made. Opinions were expressed that the statistical data regarding registration do not present a true picture of the demand in as much as they contain many "repeat orders" to obtain a phased delivery. Such "repeat orders" if any, cannot be estimated and their number in any

case is not likely to be large. The order on the registers to-day do, however, indicate the future demand for cars. In 1964 fresh registrations were the highest. These fell down considerably in 1965 due to the requirement of postal savings bank deposit of Rs. 2,000 per car with the registration of order in lieu of a bank guarantee. After the initial fall in fresh registrations in 1965, they reached a higher level in 1966 than that in 1963, while in the first nine months of 1967, fresh registrations have been one third of those of 1966. The fall in 1967 of registration appears to be the result of the prevailing financial stringency and the recession in certain sectors of the industry. The heavy back-log masks the effective recurring demand. For, fresh demand is likely to be suppressed owing to the pessimism generated by the unfulfilled orders and the possibility of effecting a purchase being remote; the frequency of replacement is also lower owing to non-availability of cars and potential buyers have to continue to use old cars when they would have preferred to discard them. Even if no fresh registrations were made and only the back-log was to be cleared, it would need four years at the rate of 30,000 cars a year. The average of fresh registrations during the last four whole years works out to 44,500. With slight fluctuations resulting from extraneous factors there is little likelihood of this average becoming lower in future. The average life of a car is approximately between 10 and 12 years after which it almost becomes a scrap. The demand therefore would consist of (i) cars which need to be replaced and (ii) new cars which are needed as a result of the development of administrative, social and economic activities and rise in income of certain classes as a result of which they can afford to purchase cars. Owing to the limitation on the production and availability of cars in the past the replacement demand would be confined only to vehicles which were registered between 10 and 12 years ago counting back from the year for which the demand is estimated. The demand to be met during the next three years would relate to the vehicles purchased and registered during the periods of the years 1958-59, 1959-60 and 1960-61. These were 24,958, 14,379 and 27,590 making an average of 22,300 vehicles. The replacement demand alone therefore would be of the order of 22,300 vehicles annually during the current and the next two years. Part of the back-log would consist of the

replacement demand, but there would be a significant fresh demand also. Taking all these factors into consideration we have come to the conclusion that the demand for passenger cars during the current year would be about 45,000 and would go up by 10,000 annually during the next two years. At the current rate of production of about 35,000 cars per annum there will be a large gap between supply and demand.

9.8.4. *Jeeps*: As regards jeeps and jeep type vehicles we are inclined to agree with the revised estimates of demand made by the manufacturers, namely 10,000 vehicles for the current year and 15,000 at the end of Fourth Plan period.

9.8.5. Commercial vehicles :

9.8.5.1. The estimates of demand for commercial vehicles have to be made separately for different categories. TELCO and Ashok-Leyland are capable of meeting the needs of long distance and heavy haulage vehicles. The medium commercial vehicles of Hindustan Motors and Premier Automobiles are also capable of long distance haulage though their carrying capacity is limited to five tonnes. In contrast to this, light commercial vehicles, particularly 1-tonne and $\frac{3}{4}$ tonne trucks are more suitable for urban use. Very recently, Hindustan Motors has also started manufacturing light commercial vehicles. These trucks can be used for certain purposes only within the city limits for example as delivery vans, ambulances and for other similar restricted activities. In exceptional cases they can also be used as carriers of passengers within the cities. The evidence before us shows that neither the producers nor the trade are quite hopeful about the future of these models as they are not confident of a continuous demand for these vehicles. Only the producer of 3-wheelers appeared to be optimistic about an assured market as these vehicles have proved popular for upcountry transport. The trade has informed us that the sale of these light trucks could increase only if the human and animal drawn vehicles are withdrawn from the roads in the cities and they are treated on a par with passenger cars in the matter of taxation. Hindustan Motors and Premier Automobiles have informed us that there has been no need for registration for their trucks and that they were capable of delivering their

commercial vehicles within 45 days. For vehicles manufactured by TELCO and Ashok Leyland a number of orders are pending on their books as can be seen from the following figures :

TABLE 14
Unfulfilled orders for commercial vehicles

Year	TELCO	Ashok Leyland
1964	44,340	1,950
1965	25,613	1,476
1966	27,590	1,296
1967 (30th September)	10,064	467

9.8.5.2. In Paragraph 6.9 we have adopted 57,600 as the installed capacity of six manufacturers for commercial vehicles. The two manufacturers of heavy vehicles appeared to be confident not only of achieving their capacity but also of finding sufficient demand for their vehicles which we are told have proved very popular among operators. Both Premier Automobiles and Hindustan Motors have a wide option to produce light, medium and heavy vehicles. These two manufacturers have also given us an impression that they are optimistic with regard to the sale of their heavy vehicles which are to be fitted with more powerful engines. Elsewhere in this Report we are giving details about various steps taken by the Reserve Bank of India and the Industrial Development Bank of India towards giving more credit facilities to manufacturers and fleet operators. With a view to alleviating the burden of operation costs on the fleet operators we are making certain recommendations in the next paragraph of this Report. We are, therefore, of the opinion that there is no reason why this sector of the industry should any more suffer from want of adequate demand. With liberalised credit facilities now available to the operators of commercial vehicles, and with the anticipated increase in trade on account of

the favourable monsoons in 1967 and other steps leading to reduction in consumer price, we think that the total demand for commercial vehicles at the end of 1967 may be estimated around 40,000. If the real benefits as envisaged accrue the demand will begin to improve during the course of this year and hereafter and we therefore place our estimates of demand for the current year at not less than 50,000 which would rise to 55,000 in 1969-70 and 60,000 by 1970-71.

10.1. During the 1953 inquiry, the Commission's attention was drawn to the following factors as responsible for retarding the development of motor transport in India. These were :

- (i) High customs duties,
- (ii) Inadequate road development,
- (iii) Bad condition of roads,
- (iv) Heavy and varying rates of taxation of commercial motor vehicles by State Governments, and
- (v) Restrictions on inter-State movement of commercial motor vehicles.

As the Motor Vehicles Taxation Inquiry Committee had then already referred to these issues in its Report, the Commission did not go in detail into these aspects but only recommended that "early action may be taken by Government to implement the recommendations made by the Motor Vehicle Taxation Inquiry Committee in regard to inadequate road development, bad condition of roads, heavy and varying rates of taxation on commercial motor vehicles levied by State Government and restrictions on inter-State movements of commercial vehicles with a view to ensuring an enlarged and steadily expanding volume of demand for motor vehicles". [Paragraphs 22(10) and 11(e).]

10.2. In 1956, also the Commission observed that substantially higher demand for various vehicles may develop if only certain positive measures were taken to encourage road transport. In this context it brought to the particular attention of the State Governments its view that expansion in road transport capacity would not take place unless they

co-operated in removing the various factors which were hampering the demand for commercial vehicles, in particular the following:—

- (i) Inadequate road development and bad conditions of roads;
- (ii) Heavy and varying rates of taxation of commercial vehicles; and
- (iii) Restrictions on inter-State movement of commercial vehicles.

The extent to which the above suggestion was implemented as intimated to us has already been discussed by us in paragraph 4.2.

10.3. During the course of the current inquiry, our attention has been drawn to a number of factors which even now inhibit the growth of road transport in the country, particularly of commercial vehicles. The Association of Indian Automobile Manufacturers and a few others have commented that the overall demand in the country in respect of cars and motor cycles is very low in comparison with that in other countries of the world. This according to them is mainly the result of low per capita income in the country, higher prices of cars, higher cost of operation and maintenance, and lack of easy payment facilities. While we recognise the above factors and their influence on the demand for cars, we do not propose to go into any detail on this issue, because in spite of these factors, the unsatisfied demand for passenger cars at present is as high as 1,20,000 and is expected to go up by 10,000 annually during the next three years as observed by us in the paragraph 9.8.3.

10.4.1. As regards commercial vehicles we are informed that the demand for them is inhibited due to a number of factors, some of which have been repeatedly brought to our notice.

10.4.2. All the manufacturers and a very large number of dealers have voiced concern about the high tax burden on commercial vehicles at the stages of production, sale and maintenance and consider it a serious impediment to the growth of motor transport in the country. In support of their

case, they have brought to our attention the findings of the National Council of Applied Economic Research that the quantum of direct and indirect taxes and duty on commercial vehicles aggregated from 43 to 49 per cent of the sale price of the vehicle. It has also been alleged that the incidence of tax element alone in road-ton mile cost haulage equals the average ton-mile tariff of railways which is seven paise. Added to this is the multiplicity of taxes such as motor vehicles tax, goods taxes, octroi, or town duties, wheel tax and other similar levies. The industry and the trade have not only suggested reduction of the tax burden but have also advocated a single point taxation in preference to the multiplicity of taxes now in vogue. The Indian Road Transport and Development Association has suggested to us that the minimum tax relief should consist of exemption from excise duty on tyres used as original equipment in vehicles, total withdrawal of excise duty on commercial vehicle chassis, reduction by half of the State sales tax on commercial vehicles and reduction of excise duty by one third of the present rates on high speed diesel oil and tyres. Although it may appear at first sight that there may be a reduction in revenue if this suggestion is accepted, this association believes that the net revenue of Government would show an increase as a result of the increase in the volume of road transport.

10.4.3. Lack of adequate finances and their non-availability at reasonable rate of interest, we are told, have resulted in diminishing the demand for commercial vehicles. It has been stated that single vehicle owners constitute over 89 per cent of the road transport operators and that their need of hire purchase facilities used to be met by private financiers. However, they are stated to have been adversely affected due to certain regulation of the Reserve Bank of India on the acceptance of deposits by non-banking companies like the private financiers thereby creating stringent conditions in the money market. We have discussed this further in paragraph 11.

10.4.4. Another factor mentioned is the restrictive policy followed by the Central or State Governments in the field of road transport such as in the observance of certain procedural formalities laid down under the Motor Vehicles Act which are not only cumbersome but result in delays.

Instances of such restrictions pointed out to us are loading and unloading at certain specified points, nature of goods to be carried, movement of public carriers to specified routes and terminals in the States only, restriction in registered laden weights operating from region to region and route to route causing difficulty in inter-State and intra-State operations of vehicles. Further, we understand that the existence of a number of check posts and octroi posts, long detention on roads by transport, police and octroi authorities has led to loss due to idle hours and increase in cost of operation. The Indian Roads and Transport Development Association has estimated this loss at Rs. 19.50 lakhs per day. While the industry and trade appreciate the need for such checks, they have pleaded that these should be carried out objectively and only at one point.

10.4.5. Another complaint voiced by the industry in this context is that at no stage in the planning have disbursements on roads been realistically aligned to the revenues earned therefrom. We are informed that the revenue from road transport and the expenditure on roads during the last three plan periods have been as follows:—

TABLE 15
Revenue from road transport and expenditure on roads
(Rs. in crores)

Plans	Revenue	Expendi- ture	Excess of reve- nue over expendi- ture	Percentage of expen- diture to the total revenue for road transport
First Plan . . .	325.62	284.60	41.02	87.4
Second Plan . . .	591.14	445.53	141.42	75.4
Third Plan . . .	1352.70	454.70	898.00	33.6

It has been reported to us further that at the end of the Fourth Plan as against an estimated revenue of Rs. 2000

crores from road transport only 38 per cent i.e. Rs. 760 crores have been earmarked for road development. TELCO has suggested that the entire revenue accruing from taxes on vehicles should be utilised for the development of roads and road transport. A few others have suggested suitable measures to be taken to ensure proper implementation of the programme of road development proposed in the report of the Chief Engineers on Road Development Plan for India (1961-81).

10.4.6 Our attention has also been drawn to certain minor factors alleged to impede the growth of demand for vehicles in the country such as lack of co-ordination between railways and trucks, unfair competition among transport operators, lack of adequate revenue in the industry for creating capital, lack of town planning and proper planning in urban transportation. Other extraneous considerations operating as disincentives to the growth of road transport industry such as corruption and harassment of vehicle operators have also been advanced. It has been represented that the road transport industry can certainly expand to meet the transport needs of the nation provided the various inhibiting factors referred to in the foregoing paragraphs are relaxed or eliminated, wherever possible.

10.4.7. We have considered the above issues and are inclined to believe that some of these factors have retarded the growth of demand for commercial vehicles in the country.

10.4.8. The Keskar Committee appointed by the Government of India for the specific purpose of inquiring into the whole question of Road Transport Taxation, has recently submitted its report to Government. Further, one of the terms of reference to the Study Group on Road Transport Financing headed by Shri R. G. Saraiya is to "undertake a comprehensive examination of the hire-purchase finance business relating to automobiles and suggest (i) how best the interests of both hire-purchase financiers and the operators can be safeguarded; (ii) whether any amendment of the Motor Vehicles Act, 1939, or any other law is necessary in this connection." We have not therefore considered it necessary to undertake a detailed study into this subject.

10.4.9. As stated earlier, most of the above difficulties placed before us now had already been brought to the notice of the Commission during the two previous inquiries and suitable remedial measures were suggested by the Commission. We are, however, constrained to note that their implementation has not been adequate. The evidence placed before us during this inquiry has given us the impression that very little has been achieved in alleviating the difficulties of the road transport industry. We are of the opinion that a stage has now been reached when the development of the road transport industry calls for a radical re-thinking. We consider that rationalisation of the existing taxation structure, elimination of procedural complexities and dealys and development of a good network of road system would go a long way in removing the present inhibitions and in increasing the domestic demand for commercial vehicles.

11.1. In paragraph 9.8.5.2. we have touched on the subject relating to availability of credit to automobile manufacturers and fleet owners. Lack of credit facilities had been recognised as one of the factors inhibiting the expansion of road transport industry by the Commission in its last Report on the industry and it had recommended that "the Reserve Bank of India in consultation with the commercial banks, should evolve a suitable scheme for extending credit facilities to transport operators for purchase of vehicles." The Reserve Bank of India had subsequently informed the Commission that under Bill Market Scheme it did not provide credit facilities directly to trade and industry and that it only granted advances to eligible banks against usance bills/promissory notes drawn by their constituents after satisfying the requiremnts of section 17(2) (a) of the Reserve Bank of India Act, 1934. It had further stated that subject to its general policy in regard to extension of credit and the credit-worthiness of the applicant bank and the party, it had been giving favourable consideration to the proposals received from banks under the Bill Market Scheme for sanction of limits in respect of bills arising out of their advances to road transport operators. The Reserve Bank had, however, stated that while it was primarily the function of the commercial banks to finance transport operators and

11. Credit facilities

the Reserve Bank's role was only to assist the banks whenever they were in need for accommodation, it had not considered it necessary to give any directions to the banks with regard to granting advances to any particular sector such as transport undertakings as these were all matters to be decided on normal banking practices. In connection with the current inquiry, we have been informed that Reserve Bank of India has now advised banks that requests for credit facilities from hire-purchase companies for financing sales of commercial vehicles should not be treated as of lower priority than those of manufacturing industries provided these are found satisfactory according to usual banking criteria. We have been further informed that finances are obtainable by the vehicle operators in any of the following manner:—

- (i) Directly from banks against hypothecation of vehicles;
- (ii) Advance by banks to hire-purchase companies/financiers against the hypothecation of book-debts arising from hire-purchase transactions, etc.;
- (iii) Facilities in the form of sales on credit on hire-purchase or instalment basis extended to operators by automobile manufacturers/financing agencies.

Very recently, we have been informed by the Industrial Development Bank of India that a separate scheme for extending re-discounting facilities, under Section 9(1) (b) of the Industrial Development Bank Act, 1964 to the transport industry has been formulated. Under the scheme re-discounting facility is extended only to promissory notes arising out of hire-purchase sales or conditional sales and resales of motor vehicles to road transport operators by manufacturers of motor vehicles or approved hire-purchase finance companies for the present. There are at present nine hire-purchase companies for this purpose of which we understand, two are subsidiaries started by two vehicle manufacturers. These facilities are available only to commercial banks and State co-operative banks approved from time to time. The number of such institutions approved at present is 68. A transport operator for this purpose may be a public or private limited company, a co-operative society, a partnership firm or even a sole proprietor. The period of deferred payment should

not be less than six months or more than 36 months subject to Reserve Bank's directives, if any. Under the scheme, the approved banks are given re-discounting facilities by the Industrial Development Bank which will re-discount the promissory note at a rate of six per cent per annum provided the banks do not charge by way of discount more than nine per cent per annum to the manufacturing or hire-purchase finance company. The latter are not expected to charge interest to the road transport operators at a rate of more than seven and a half per cent flat per annum. The vehicles in respect of which this facility is open are new trucks and jeeps irrespective of the tonnage per vehicle and passenger buses plying for hire. The scheme being intended for assisting road transport operators in the private sector, no facilities under this are available to persons who are not such operators or to Government or quasi-Government bodies. The minimum amount of transactions covering a set of promissory notes representing deferred payment will be Rs. 10,000, while arrangements involving re-discounting of promissory notes for more than Rs. 10 lakhs in respect of a single transport operator, over a year, will require prior clearance with the Industrial Development Bank.

11.2. We understand that a non-official Hire Purchase Bill based on the suggestions contained in the 20th report of the Law Commission of India was introduced in Lok Sabha in June 1967. We expect that these liberalised credit facilities will help the development of the road transport industry.

11.3. At present the question of providing financial assistance to road transport operators is under examination by a Study Group referred to already by us in paragraph 10.4.8 of this Report. We expect that these liberalised credit facilities will help the development of the road transport industry.



CHAPTER IV

RAW MATERIALS AND COMPONENTS

12.1. Alloy steel bars, billets, tubes and sections, steel flat products and pig iron constitute the main raw materials for the automobile industry. In addition,

12. Raw Materials paint and thinners, glass including safety glass, rubber, cotton, iron, non-ferrous metals, plastic etc. are also required as raw materials. An analysis made in 1958 in connection with hearings before the Senate in U.S.A. on administered prices of automobiles estimated that of the total cost of basic raw materials used in a passenger car, 52.6 per cent constituted the cost of steel, and the other main items in descending order of percentages of cost were as follows :—

	(In percentage)
Paint and thinners	10.2
Safety glass	10.0
Non-ferrous metals, including copper lead, magnesium, antimony, aluminium, cadmium, chromium, molybdenum, nickel silver, tin, tungsten, vanadium and zinc	7.1
Rubber	5.3
Cotton	4.9
Iron	4.2
Wool	3.3
Other items such as asbestos, asphalt, mica, cork, hair, leather, paper products, fillers, wood, plastics and chemicals etc.	2.4

Most of these items of raw materials are however processed before these reach the automobile or automobile ancillary manufacturer. The quantities per vehicle vary from one manufacturer to the other depending on the design of the vehicle. It has been estimated that about 85 per cent by weight of a passenger car is made up of iron and steel, of which iron constitutes about 15 per cent. The total estimated consumption of steel billets, sheets, sections, castings and forgings and tool steels by the automobile industry in 1965-66 were about 1,37,000 tonnes of which about 89,000 tonnes were imported. The total cost was about Rs. 23 crores of which about Rs. 15 crores was the imported steels. The details of these are given in Appendix X.

12.2. An assessment of the raw material requirements is important because considerable quantities have to be imported. Alloy steel sections, steel sheets, flat products and non-ferrous metal constitute the bulk of the imported raw materials and these, therefore deserve special attention.

12.3. All the automobile manufacturers had been requested to furnish the specifications of the principal imported and indigenous raw materials. Only three of them have given the details as required by us. Simpson and Company uses bars and sections complying with 25 standard specifications. Of these the requirements of two varieties are met entirely from indigenous sources, three varieties are partly and the rest entirely imported. Standard Motor Products has furnished a list of steels of 14 specifications, ten of which are imported and the rest are indigenous. Ashok Leyland buys steels complying with 27 specifications of which six are indigenous and the rest imported.

12.4. An overall assessment of the demand for alloy steel and flat products by the automobile industry had been made by the Working Group on Transport Equipment but these estimates were based on a much higher rate of automobile production than has been adopted by us now.

These will therefore have to be revised. The norms of material consumption as accepted by the Working Group for Transport Equipment were as follows :

TABLE 16
NORMS : Steels consumption per chassis in tonnes

Category of Steel production	Commercial Vehicles		Jeeps	Cars
	Heavy duty	Other commercial vehicles		
1	2	3	4	5
Sheets & Plates .	1.620	0.950	0.550	0.700
Carbon steel-bars, billets, tubes & rolled sections	0.923	0.550	0.160	0.140
Alloy Steel bars, tubes & rolled sections .	0.700	0.840	0.140	0.130
Steel castings . . .	0.067	0.060	negligible	negligible
Total Steel	3.310	2.400	0.850	0.970
Iron castings* . . .	0.700	0.600	0.250	0.160
Total Iron & Steel .	4.010	3.000	1.100	1.130

* Working group on Engineering Industries.

These estimates are very close to the actuals as ascertained by our Cost Accounts Officers and we have adopted these figures for estimating the future requirements of iron and steel by the automobile industry.

12.5. Our estimate of average production of automobiles in the three years 1967-68 to 1969-70 is as follows :—

Heavy Commercial Vehicles (Over 9 tonnes) . . .	383
Other Commercial Vehicles	53,300
Jeeps & Jeep type vehicles	10,000
Passenger Cars	36,000

Applying the norms worked out by the Working Group

the annual requirements of iron and steel products by the automobile industry for future would be as follows :

TABLE 17

Requirements of iron and steel products by the Automobile Industry

(in tonnes)

Category of steel products	Commercial Vehicles		Jeeps	Passenger cars	Total
	Heavy duty	Others			
Sheets & Plates .	620	50,600	5,500	25,200	81,920
Carbon steel bars, billets, tubes and rolled sections	354	29,300	1,600	5,040	36,294
Alloy steel bars, billets, tubes and rolled sections . . .	268	44,800	1,400	4,680	51,148
Steel castings . .	26	3,200	..	..	3,226
Iron castings . .	268	32,000	2,500	5,760	40,528
TOTAL .	1,536	159,900	11,000	40,680	213,116

As against this the Working Group has estimated the requirement at 459,700 tonnes by 1970-71. Its estimates were based on a production of 1,10,000 commercial vehicles and 80,000 cars and jeeps. Our estimates are lower at about 53,700 commercial vehicles and 46,000 cars and jeeps. These figures do not include raw material requirements of the ancillary industries.

12.6. The Working Group for Transport Equipment had estimated the requirements of foreign exchange for raw material for the automobile industry by 1970-71 at Rs. 41.9 crores in terms of pre-devaluation rupees on the basis of total tonnage of 459,700. We had requested all the manufacturers to furnish information about their own estimates

of requirements of foreign exchange for importing raw materials. Only six of the manufacturers have furnished this information and from their replies it appears that these six alone would require foreign exchange of Rs. 55 crores for raw materials. Even allowing for the fact that these estimates are in terms of post-devaluation rupees, the amount appears to be considerably higher than the Working Group's estimate. This disparity will become greater if the figures for the two manufacturers now left out are also included. The estimates of the automobile manufacturers seem therefore to be greatly exaggerated.

12.7. Since detailed calculations have been set out by the Working Group on Transport Equipment with regard to the requirements of ferrous metals of the automobile manufacturers we have adopted the standards used by the Working Group. Allowing for an increase of 40 per cent as the effect of devaluation and reducing the number of vehicles according to our revised estimate the value of the requirements of iron and steel for the automobile industry would be as follows:

Particulars of automobiles	Rate per unit	Total
	Rs.	Rs.
Commercial vehicles	3,500	18.79 crores
Jeeps and cars	2,100	9.66 crores
TOTAL .		28.45 crores

We have earlier given the broad analysis of other basic raw materials needed for automobiles. Of these, safety glass, non-ferrous metals, rubber, cotton and other items are likely to be used almost entirely by automobile ancillary industry. Taking into consideration this factor, the value of other raw materials needed by the automobile industry would be of the order of about 15 to 20 per cent of the value of the ferrous materials. Adopting the higher figure of 20 per cent this would work out to about Rs. 5.7 crores.

The total requirement of raw materials for each of the next two years would thus be of the value of about Rs. 34.2 crores for the automobile industry alone. At present about 35 to 65 per cent of the total components is being supplied by ancillary and other manufacturers. This proportion is likely to increase in future rather than become lower. The future share of the ancillary industry in the components that go into the automobiles would therefore be of the order of 50 per cent and even more. In view of this high proportion of components supplied by ancillary manufacturers the latter's share in the cost of raw material is likely to be equal to that of the automobile manufacturers. In terms of composition however the raw materials needed by the ancillary industry would not be in the same proportion as the raw materials required by the automobile industry for the ancillary industry would have greater requirements of non-ferrous metals and almost entirely of all the glass, rubber, plastics and other items. Considering however the fact that their requirement of steel will be much lower, the total value of the raw material requirements needed by the ancillary industry can be taken at about 80 per cent of the total requirement of the automobile industry or about 27 crores. In arriving at this figure we have taken into consideration the fact that in course of time the imported finished as well as semi-finished components will be substituted by their indigenous counterparts supplied mostly by ancillary manufacturers. On the basis of the study referred to in paragraph 12.1 the cost of the raw material for a passenger car worked out to about 25 per cent of its ex-factory price. The same ratio would broadly speaking be applicable to commercial vehicles too. The total annual ex-factory value of the automobiles estimated to be produced in the next two years works out to about Rs. 250 crores. One-fourth of this works out to Rs. 62.5 crores, which is very near the figure arrived at on the consideration of the separate requirements of the automobile and automobile ancillary industries.

12.8. The Indian Standards Institution has reported that according to a survey conducted by it there existed a demand for over 1,500 varieties of alloy and special steels in India generated through over-seas technical collaborations from a number of countries. The demand for each

variety being small most of them cannot be taken up for indigenous manufacture economically. It is stated that the need of the Indian industry could be covered from about 158 varieties of steels which have been standardised for use in India in I.S. 1570-1961. This was further rationalised due to national emergency by Emergency Amendment No. 2 E to IS: 1570-1961 to 74 varieties. The Indian Standards Institution and a Technical Cell—a Sub-Committee of the Development Council for Automobile and Allied Industries earlier constituted by the Association of Indian Automobile Manufacturers and the All Indian Automobile and Ancillary Industries Associations have ultimately selected 28 varieties which they feel can meet the requirements of bars, billets and sections required by the automobile industry. The list is given in Appendix No. XI. The Technical Cell has carried out a concentrated study of the diverse problems connected with substitution of imported raw materials required for the automobile and ancillary industries and has examined the scope for substitution. According to the latest information available to us we find that the Technical Cell, has compiled two statements indicating the requirements of wrought steels for the various manufacturers of automobiles in the country. The lists contain information about the quantitative requirements, specification-wise separately for round, square and hexagonal sections, the sizes required under each category, total yearly requirements individually and the consolidated annual requirements of the industry. The lists had been circulated to the members of the Technical Cell and the comments received from the members are said to be quite favourable.

12.9. We are informed that the Technical Cell also proposes to consider rationalisation of steel sheets and flat products both in the matter of specifications and sizes. Substitution of scarce materials, use of plastics for automobile components and substitution of imported materials for individual components are some of the problems that are due for consideration by the Technical Cell.

12.10. The Indian Standards Institution appears to have done considerable work in estimating the specification-wise and section-wise requirements of steels by the automobile industry. Their estimates are given below in Table 18.

13. 35Mn2MO28 .	263.0	1005.3	181.8	263.0	1151.5	187.0	290.9	1623.4	213.2	345.0	1996.1	2.8.1
14. 15Cr65 .	145.0	..	..	159.7	..	..	165.5	..	..	198.8	..	..
15. 17Mn1Cr95 .	371.3	..	..	419.9	..	..	435.7	..	..	516.0	..	..
16. 20MnCr1 .	2633.3	952.9	..	2925.9	1048.5	..	3032.8	1086.6	..	3605.6	1304.2	..
17. 40Cr1 .	1034.3	1325.5	99.7	1434.1	1472.6	110.1	1471.8	1919.0	114.5	1509.4	2323.6	137.4
18. 40Cr1MO28 .	444.1	4406.3	9.0	498.6	3367.6	10.2	602.3	4584.9	11.1	718.8	5503.4	14.8
19. 25Cr3MO55 .	435.6	26.0	..	36.4	26.0	..	72.8	52.0	..	145.7	104.0	..
20.												
21. 35Ni1Cr60 .	371.8	391.1	4.8	401.8	427.1	4.8	499.9	496.0	9.6	690.3	592.1	19.2
22. 15NiCr1MO12 .	1055.8	174.4	1.2	1135.4	184.3	1.5	1337.8	218.1	1.5	1734.5	265.6	2.0
23. 15Ni2Cr1MO15	610.8	290.1	..	653.8	292.3	..	946.3	328.2	..	1493.1	394.4	..
24. 40Ni2Cr1MO28	805.8	76.0	..	966.3	76.0	..	1115.4	84.5	..	1294.5	101.4	..
25. 40Ni3Cr165Mo55	158.0	..	6.5	164.3	..	6.5	304.4	..	12.9	568.3	..	25.8
26. 16NiCr2Mo20	204.6	..	..	139.2	..	..	153.1	..	..	168.5	..	..
27. 20Ni55Cr50Mn20	1347.4	634.1	..	1520.1	689.4	..	1722.9	820.3	..	2097.3	1005.9	..
28. 20Ni2M o55 .	783.3	402.9	..	934.1	483.9	..	1228.7	631.7	..	1534.4	789.8	..
TOTAL	20,545.6	15,904.5	1,149.2	19,892.2	17,447.8	796.4	23,107.6	22,127.5	955.7	28,818.3	27,006.8	1,276.1

12.11. The Rourkela Steel Plant has commenced manufacture of flat products suitable for the automobile industry. The sheets and plates required by the industry have to be of deep drawing quality and must be pickled.

12.12. It has been pointed out by the automobile manufacturers that the flat steels which they require are of the aluminium killed variety, whereas the Rourkela steel plant is in a position to manufacture rimming and semi-killed steels and only small quantities of aluminium and silicon aluminium killed varieties. We are informed that the automobile manufacturers have been supplied with samples of various steels manufactured by Hindustan Steels Ltd., Rourkela which have been tested by them in order to come to a decision on the quantity of each type of sheet and plate which can be utilised by them. From the minutes of a meeting held on the 23rd November, 1966 between the representatives of the D.G.T.D., the automobile manufacturers and the Hindustan Steel Plant, Rourkela it appears that the automobile manufacturers have indicated their requirements to the steel plant. The Senior Industrial Advisor of D.G.T.D. said at the meeting that there was a possibility of the Rourkela Steel Plant meeting the requirements of the manufacturers of sheets and plates in rimming and semi-killed qualities which amounted to 21692 and 8353 tonnes respectively. The Rourkela Steel Plant may not be in a position to supply aluminium killed and silicon aluminium killed steel sheets and plates in the near future. The chief complaint of the automobile manufacturers is that the Rourkela Steel Plant is unable to supply steel flat products according to the delivery schedules indicated by them. Hindustan Motors could not obtain its requirements of the requisite category of steel from the Rourkela Steel Plant. Premier Automobiles did not find particular quality of plates supplied to it by Hindustan Steels Ltd., Rourkela, to be satisfactory, besides the supply being in restricted quantities. Hindustan Steel Ltd., Rourkela was in a position to supply to TELCO almost the entire quantity of 26,720 tonnes of flat steels required for the production of 21,000 vehicles in 1966-67 and stepping up its output to 24,000 vehicles in 1967-68, but owing to more prior claims on the production of the Rourkela Plant, TELCO could only get 7000 tonnes and the remaining had to be imported. Though specifications

and dimensions of steel flat-products produced by Hindustan Steels Ltd., Rourkela can meet approximately 85 per cent of Mahindra & Mahindra's requirements of cold rolled sheets and plates it was pointed out during the public inquiry by the representative of Hindustan Steels Ltd. that it is many years behind its manufacturing programme. It may not yet be able to meet the requirements of the automobile industry to the extent that is needed or possible.

12.13. At the public inquiry the automobile manufacturers stated that for various reasons they would prefer to use indigenous steels rather than import their requirements. For one, the waiting period in getting steel from abroad is six months or more and to that extent their capital is locked up. This can be saved if they get it from indigenous sources but the supply must be assured. The other drawback with imported steels appears to be that the importer cannot be certain about the country from which he will be required to get his supplies. Prices in different countries are different; besides, one cannot be sure of quality in the case of some countries. We were also informed at the public inquiry that the prices of indigenous steel are lower than those of steel imported from the United States and United Kingdom. There appeared to be general agreement that local steels were reasonably priced and the automobile manufacturers would be quite willing to use them provided regularity of supply could be assured. For it is difficult to plan production unless the supply is regular. D.G.T.D. has informed us that samples of steel sheets suitable for body pressings have been developed in limited quantities in the Rourkela Steel Plant and that these were found suitable by the vehicle manufacturers. So also plates for the production of long members for chassis frames are likely to become available from Rourkela.

12.14. D.G.T.D. has informed us that all the tool and alloy steels required by the automobile industry are being currently imported. Some plants are being set up for the manufacture of tool and alloy steels. Perhaps it would take another two or three years before such steels become available from indigenous sources. We had also addressed the manufacturers of alloy steel for information about their plans to

manufacture the rationalised varieties of steels. In reply, the Hindustan Steel Ltd. (Durgapur Steel Plant) has informed us that the main line of its production is structural steel and that the production of steels in exact conformity with the rationalised steels was negligible—only small quantities were produced to meet internal requirements. The Mysore Iron & Steel Co. has its plant under installation which is expected to be commissioned in April 1968. Normal production can be expected only a year later. The specifications of steel to be manufactured have not yet been finalised. Guest, Keen, Williams Ltd., has commenced production of forging quality alloy steel required by the automobile industry. Its past production of special steels for outside sale was virtually confined to spring steels. Its licensed capacity is for production of 45,000 tonnes per annum of free-cutting steels and spring steel including certain high carbon and alloy steels and for rolling bars and rods to the extent of 1,35,000 tonnes per annum. The corresponding installed capacity figures are 30,000 tonnes and approximately 97,000 tonnes. Firth Stirling Steel Company of India Ltd. has informed us that its activities will be confined to rolling bars made by other primary producers. It has a capacity of 600 tonnes per annum for cold drawn and centreless ground rounds in alloy steel suitable for the automobile industry. Though Mahindra Ugine Steel Company did not reply to our questionnaire, its representatives said at the public inquiry that it is to-day in a position to supply alloy steel of various categories required by the automobile industry. It has started rolling alloy steel but by next year it will be in a position to manufacture primary steels to supply products rolled from indigenous billets. As a user Mahindra & Mahindra has found the quality satisfactory. It claims to have received good support from users and hopes to be able to supply most of the alloy steel requirements of the industry in the next two or three years. The other manufacturers to whom questionnaires were sent asking for detailed information about their manufacturing programme either did not reply or did not furnish the specific information requested by us about their manufacturing programmes of the rationalised categories of steel. Considering the information furnished to us the general observation made earlier in this

chapter appears to be true that it will be quite some time before the indigenous manufacturers have the capacity and the capability to meet the requirements of the automobile manufacturers and till then the requirements will have to be met from imports.

12.15. Difficulties were also being experienced in the supply of pig iron of the correct specifications which is a very important raw material for castings. D.G.T.D. has, however, informed us that pig iron is now a decontrolled commodity and available from indigenous sources. It has not in recent times received any complaints as regards its supplies. During the public inquiry it was stated that there is only one large scale supplier, namely, the Bhilai plant of Hindustan Steel Ltd., but the material it supplies is not of consistent quality. The plant is manufacturing four grades of pig iron but most consumers appear to insist on getting only grades I and II. This results in the demand being more than the supply. It was stated that if the manufacturers could spread their indents over all the grades, much of the difficulty about shortages might disappear. The representative of the National Test House, Alipore pointed out that during tests they had traced the cause of many faults in finished parts to the use of defective pig iron and alloy steels.

13.1. In 1956 the Commission discussed details of manufacturing programmes of automobile units and made an assessment of the progress of each unit from the point of view of phasing of their programme of manufacturing components and parts. With the establishment of independent automobile ancillary units in the country the emphasis has naturally shifted to progressive increase in the indigenous content of the vehicles. The Jha Committee in its report estimated the percentage of indigenous content in different vehicles on the balance of the ex-factory price of the complete vehicle of the corresponding model in the country of origin after deduction therefrom the ex-factory price of the components which were still being imported. The indigenous content in different vehicles and engines on the basis of

13. Components and parts—progress of indigenisation

import licensing figures for the period October 1959 to March 1960 was assessed as follows :

Types of vehicles	Indigenous content (as per-centage)
A. Cars and Jeeps	
(i) Hindustan Ambassador	70.5
(ii) Fiat 1100	47.0
(iii) Standard 10	32.5
(iv) Jeep	65.0
B. Commercial Vehicles	
(i) Dodge with Perkins diesel engines	68.0
(ii) Tata Mercedes Benz Truck	64.0
(iii) Tata Mercedes Benz Bus	71.0
(iv) Leyland Comet	38.5
(v) Bedford with Perkins diesel engine	46.0
C. Engines	
(i) Meadows engine	50.0
(ii) Perkins P-6V diesel engine	64.0

13.2. The Committee made a study of the progress made by the manufacturers in relation to the original manufacturing programme. The achievement of the different vehicle manufacturers upto 1960 was reviewed by the *Ad hoc* Committee as follows :—

“The Hindustan Ambassador is undoubtedly the leader in this field. Even in 1950-51 the important components of the engine, transmission and axle were made by Hindustan Motors. Castings for

cylinder blocks, cylinder heads, etc., were of indigenous origin while forgings were being imported and machined. At the time of the first Tariff Commission enquiry the indigenous content was in the neighbourhood of 45 percent. By the time of the second Tariff Commission enquiry, viz., in 1956, the indigenous content had gone up to 56 percent and today on the assessment made by us, it is a little above 70 percent. They have in fact made all the components which an automobile manufacturer normally produces, except that in respect of body panels they are only making certain panels and not others. The further progress in increasing the indigenous content of the Hindustan Ambassador will depend mainly on the development of ancillary industries and Hindustan Motors themselves have a relatively small contribution to make.

“The Fiat 1100 was approved in November, 1953, for manufacture and the programme submitted to Government by Premier Automobiles aimed at the completion of the manufacture of the engine, transmission and axles by the end of 1956. At the time of the second Tariff Commission enquiry in 1965, the items (apart from tyres, tubes, batteries, etc., which were bought from other industries) which Premier Automobiles were making were the fuel tank, silencer assembly, and the radiator for limited number of vehicles. Their present position on our assessment is that the vehicle is 47 per cent indigenous. They are, therefore, very much behind schedule. They have, however, placed orders for the plant and machinery necessary to make the remaining items which were included in their programme of manufacture. Part of the machinery has already been installed.

“Messrs Standard Motors had begun in September, 1953 with the Standard Vanguard and they got approval to the manufacture of Standard 10 in October, 1954. In both cases the programme aimed at the completion of the manufacture of the

engine, transmission and axle by the end of 1956. At the time of the Tariff Commission enquiry in 1956, they had made some components such as, water pumps, valve guides and fuel tanks and were machining cylinder heads and blocks for the Standard Vanguard. They had made little progress with their Standard 10. Subsequently their production of Vanguard has been discontinued and they have achieved 32.5 per cent indigenous content in respect of Standard 10. They have placed orders for additional machinery and they have also developed foundry capacity in a subsidiary unit. Their progress has been the slowest.

“Turning to the Jeep, Messrs. Mahindra & Mahindra had got their programme approved in June 1954. It was their intention to manufacture the engine, transmission and axle by the end of 1958. At the time of the Tariff Commission enquiry they had made little progress but now they have achieved 65 per cent indigenous content. The equipment for their completion of their programme has already been installed though they have yet to go into regular production of axles. This, we understand, was due to the delay in getting furnaces.

“Turning to trucks, the Dodge truck of Premiers had a number of indigenous items including leaf springs, propeller shafts, cylinder assembly, etc. even in 1950-51. In September, 1953, following the first Tariff Commission enquiry, they got approval to their programme of manufacture which contemplated completion of the manufacture of engine, transmission, axles, etc., by the end of 1956. At the time of the second Tariff Commission enquiry in 1956, the important components of the engine and gear box had been completed but the axle had yet to be developed. Much of their investment in the engine programme has however been a waste because the consumer demand has gone over to diesel engines and the Defence Ministry is also not likely to go in for their petrol trucks.

Their present indigenous content is 68 per cent but this takes account of the diesel engine supplied to them by other manufacturers. The two diesel engines produced independently in the country have themselves varying degree of indigenous content. However, so far as Premiers are concerned, since they have been asked to buy their engines from other manufacturers, it is but appropriate to treat the engine as indigenous in assessing the progress made by Premiers.

"The Tata-Benz trucks of TELCO were approved in 1954 with a manufacturing programme which aimed at the engine, transmission gear box and axles being made in India by the end of 1959. The first phase of their manufacturing programme was to commence in 1955. They had made little progress at the time of the second Tariff Commission enquiry but they have developed production of all the items which they had undertaken to produce in India by the end of 1959 according to their original schedule of manufacture. Their performance has been equal to their promise.

"The Leyland Comet of Ashok Leyland was approved for manufacture in 1954 and the programme was to make the important components in India by the end of 1959. They have, however, achieved an indigenous content of 38.5 per cent only according to our estimation. Part of the delay was due to a complete reorganisation of the Company's capital structure which became necessary for certain reasons and caused a major dislocation of their programme. The machinery required for the programme has however been fully ordered and the programme should be completed in another twelve to fifteen months.

"Bedford trucks were taken up by Hindustan Motors only in 1958 when they abandoned the Studebaker programme which they had started with. The machinery for the chassis, transmission and axles has been ordered in full and they have

just started production of the chassis frames. They have lost no time in going ahead with this programme from the time it was approved."

13.3.1. The overall picture that emerged out of the *Ad Hoc* Committee's study was that the progress made by different firms had not been uniform. Some vehicles like the Hindustan Ambassador car and Tata Mercedes Benz truck had practically completed their manufacturing programmes while others had yet to do so. Standard Motors on the whole had been the slowest of vehicle manufacturers. All firms had, however, made commitments in respect of plant and machinery which meant a steady improvement in their indigenous content.

13.3.2. A suggestion was made by the *Ad Hoc* Committee that the automobile manufacturers may undertake co-operative ventures by contributory production so that a unit equipped for the manufacture of a particular component or assembly in numbers larger than needed for its own requirement may also manufacture similar parts for others. This suggestion has not found favour with any of the manufacturers for obvious reasons. In a competitive industry it is not possible to expect, that the resources of different competing units can be pooled and be made available to each other. The automobile manufacturers have pointed out, that the basic criteria for deciding to manufacture components in preference to buying them is assured quality, prompt delivery and competitive prices. It gives credit to the automobile as well as the ancillary industry that the automobile manufacturers have made full use of the ancillary capacity in the country and that the latter stood up to the requirement of the industry.

13.3.3. The development of the automobile ancillary industry in India has been rapid and was no doubt due to the encouragement given to it by Government as well as the automobile manufacturers. We have no evidence to lead to the conclusion that any possible multiplicity of units manufacturing the same items has resulted from a deliberate policy of Government to discourage monopolistic tendencies. The degree and extent of duplication of capacity which is

likely to be accidental rather than deliberate has been more fully dealt with in our report on the automobile ancillary industry.

13.4. During the Second Five Year Plan the Planning Commission had observed that since the publication of the Report of the *Ad Hoc* Committee all the firms had made further investment on plant and machinery and had been able to achieve further indigenous content in their respective vehicles ranging from 10 to 15 per cent. The foreign exchange difficulty had been an important factor which impeded progress of the industry.

13.5. The targets of indigenous content set for achievement by the end of the Third Five Year Plan were 80 to 85 per cent. The progress of indigenisation achieved during the Third Five Year Plan period on all vehicles as reported by the D. G. T. D. is as follows :

TABLE 19
Progress in indigenisation achieved during the Third Plan Period

(In percentage)

Passenger Cars	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67
Ambassador .	74.5	76.2	77.5	80.4	90.0	95.0
Fiat 1100 .	49.0	56.0	64.0	74.0	88.0	97.5
Standard Ten/ Herald .	43.8	45.3	60.2	65.0	79.0	88.8
Willy's Jeep .	59.0	N.A.	79.3	82.9	90.0	92.9
<i>Commercial Vehicles</i>						
Bedford .	60.9	60.9	60.9	73.9	80.0	84.0
Dodge/Forgo .	74.0	74.0	79.8	88.2	94.0	94.0
Mercedes Benz	67.0	67.0	77.0	86.0	91.0	93.0
Leyland Comet	43.3	58.8	76.0	81.5	85.4	89.0
Tempo 3-Wheeler	63.0	N.A.	75.0	86.4	88.5	94.0
Tempo 4-wheeler	..	..	..	..	..	84.0
<i>Vehicular Diesel Engine</i>						
Perkins P-6 .	64.0	N.A.	N.A.	85.0	91.0	95.0
Meadows 4-cylinder .	38.0	38.0	54.0	62.0	83.0	83.0

These percentages are it is presumed based on the comparison of the ex-factory cost of the vehicle in the country of origin with the pack value of the components not yet deleted, together with similar values of components purchased from other foreign sources. While the names of the imported components were made available to us by the D. G. T. D. we could not secure particulars of the value of the entire C. K. D. vehicles in the country of origin and these percentages could not therefore be verified. We have in view of the difficulties in securing these particulars suggested in the next paragraph an alternative and more practical method for the calculation of progress in indigenous content.

13.6. We have received details about the indigenous content in respect of a few vehicles from their manufacturers covering the period 1965-66. These are somewhat higher than the figures given by D. G. T. D. reproduced in table 19 as may be seen from the following table No. 20.

TABLE 20

Indigenous content of a few models of vehicles as furnished by manufacturers

(In percentage)

Types of vehicles				as furnished by D.G.T.D.	as furnished by producers
<i>Cars</i>	Ambassador	.	.	90.0	92.0
	Fiat 1100	.	.	88.0	95.9
	Standard Herald	.	.	79.0	88.8
	CJ-3B Jeeps	.	.	90.0	92.9
<i>Trucks</i>	Dodge/Fargo	.	.	94.0	95.9
	Leyland Comets	.	.	85.4	86.3
	Tempo 3-Wheeler	.	.	88.5	92.0

13.7. In this connection the D. G. T. D. has stated that in order to fulfil the targets for achieving the indigenous content as well as to increase the production to the level of capacities approved for each manufacturer substantial additional equipment was needed. Further, the ancillary industry on which the vehicle manufacturers very much depended for the supply of many components was in its infancy both in regard to the coverage of components as well as in the volume of production and these had to be increased to substantial levels to cover the progress of vehicle manufacturers. The capital goods required were released during the third year of the Third Plan and it took some time to increase the scope of the ancillary industry. As a result of this the progress of the industry could not be maintained at a steady rate with particular reference to achieving the indigenous content. However, all the efforts put in, though late, came to be realised during the last year of the Third Plan and as a result, it could be stated that all the vehicles barring Bedford could fulfil the targets.

13.8. A table showing the percentage by value of components (a) directly imported (b) bought from ancillary manufacturers and (c) produced in their own factory by the various automobile manufacturers during each of the last five years (compiled from their replies to our questionnaires) is given below :

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TABLE 21

The percentage by value of components (a) directly imported (b) bought from ancillary manufacturers and (c) produced in their own factory by the various automobile manufacturers during each of the last five years

Name of Producer	Type of Vehicle	Per cent of components directly imported					Per cent of components purchased from ancillary suppliers					Per cent of components manufactured by producers themselves				
		1961-62	1962-63	1963-64	1964-65	1965-66	1961-62	1962-63	1963-64	1964-65	1965-66	1961-62	1962-63	1963-64	1964-65	1965-66
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Hindustan Motors	(i) Ambassador	29.9	25.4	15.5	15.5	9.9	16.7	21.7	29.7	30.2	31.5	53.4	52.9	54.8	54.3	58.6
	(ii) Bedford 167" WB Diesel truck	47.2	29.7	28.9	28.8	19.4	47.1	58.1	56.8	57.7	58.1	5.7	12.2	14.3	13.5	22.5
2. Premier Automobile	(i) Fiat Car	51.1	43.1	35.2	30.4	19.3	21.9	26.1	27.9	32.2	41.7	27.0	30.8	36.9	37.4	39.0
	(ii) Kew Truck chassis with Perkins Engine	25.1	23.0	21.8	14.9	8.1	49.9	53.0	53.3	55.9	64.9	25.0	24.0	24.9	29.2	27.0
	(iii) Kew Truck chassis with Meadows Engine	33.0	33.9	30.6	24.6	20.6	34.8	26.8	23.4	31.0	36.6	32.2	39.3	46.0	44.4	42.8
	(iv) Kew Truck chassis with PA made petrol Engine	34.6	34.4	33.2	28.2	16.9	24.2	27.1	27.9	30.2	42.7	41.2	38.5	38.9	41.6	40.4
	(v) Kew bus chassis with Perkins Engine	22.9	20.1	19.9	15.6	10.5	50.5	53.1	52.8	56.3	62.8	26.6	26.8	27.3	28.1	26.7

(vi) Kew bus chassis with Meadows Engine		32.3	32.5	28.0	25.5	16.8	30.4	30.2	29.3	30.3	40.6	37.3	37.3	42.7	44.2	42.6
(vii) Short wheel base chassis		60.2	60.7	62.3	46.6	45.6	14.0	15.8	15.8	21.4	21.8	25.8	23.5	21.9	32.0	32.6
3. Standard Motors		(i) Herald Saloon	56.6	54.9	43.0	40.4	27.8	17.4	16.5	20.8	23.0	29.3	26.0	28.6	36.2	36.6 42.9
		(ii) 1 tonne vehicle	..	..	..	..	45.6	..	..	..	28.7	..	..	..	..	25.7
4. Ashok Leyland		Comet chassis	56.4	41.6	36.4	33.0	22.4	41.4	55.2	58.0	61.3	71.7	2.2	3.2	5.6	5.9
5. TELCO		(i) L-312-42	19.8	17.7	16.9	12.0	9.0	19.1	20.6	22.9	25.4	26.1	61.1	61.7	60.2	62.6 64.9
		(ii) L-312-48	15.8	14.1	12.9	12.3	9.5	18.0	19.1	21.4	23.3	24.9	66.2	66.8	65.7	64.4 65.6
		(iii) L-1210-42	..	..	..	10.4	8.7	..	..	..	27.0	27.2	..	..	..	62.6 64.1
		(iv) L-1210-52	..	..	..	12.1	10.6	..	..	..	24.6	25.1	..	..	..	63.3 64.3
6. Mahindra & Mahindra		CJ-3B-Jeep	28.1	24.1	27.7	17.9	..	22.0	22.7	20.6	29.6	..	49.9	53.2	51.7	52.5 ..
7. Bajaj-Tempo		3-Wheeler.	..	..	..	12.0	8.0	..	..	..	45.0	47.0	..	..	..	43.0 45.0
8. Simpson & Co.		(i) P6V Bare Engine	17.7	10.4	8.2	8.6	7.6	29.4	36.5	38.0	37.3	36.5	52.9	53.1	53.8	54.1 55.9
		(ii) P6V Bare Engine for Kew Dodge chassis	16.6	9.8	8.1	8.6	7.5	27.5	34.6	35.8	34.6	33.8	55.9	55.6	56.1	56.8 58.7
		(iii) P6V Bare Engine for Bedford chassis	16.4	7.6	7.9	8.2	7.3	31.3	38.5	35.6	34.5	33.9	52.3	53.9	56.5	57.3 58.8

13.8.2. The position of import substitution by increasing the purchase of ancillary components as well as by manufacture in own units was as follows for a few of the vehicles according to the figures reported by the manufacturers :

Name of Vehicle	1961-62			1965-66		
	Imported	Bought out	Self-manufactured	Imported	Bought out	Self-manufactured
Ambassador .	29.89	16.72	53.39	9.83	31.54	58.63
Fiat .	51.10	21.90	27.00	19.30	41.70	39.00
Standard .	56.57	17.38	26.05	27.84	29.31	42.85
Telco .	19.80	19.10	61.10	9.00	26.10	64.90
Ashok-Leyland .	56.38	41.44	2.18	22.42	71.67	5.91

It would be observed that in all cases the proportion of import content went down considerably and was replaced partly by purchase from ancillary manufacturers and partly by self-manufacture. In the case of Ambassador import substitution of 20.06 per cent was effected out of which 14.82 was contributed by the ancillary manufacturer and 4.94 per cent only by the automobile manufacturer. In the case of Fiat the percentage of the value of parts replaced is 31.80 out of which 19.80 per cent was contributed by the ancillary manufacturers and 12.0 per cent by the vehicle manufacturer. Import substitution in the case of Standard was of the order of 28.73 per cent of which 16.80 per cent was provided by the manufacturer and 11.93 per cent by the ancillary manufacturers. In the case of Telco 7.09 per cent of the imports were substituted through purchase from ancillary units and the remaining 3.71 per cent by manufacture in the unit. In the case of Ashok Leyland the increase in the bought out parts was of the order of 30.23 per cent and for self-manufacture of only 3.73 per cent.

13.9. While it is possible to establish a correlation between the pack value of the entire unassembled vehicle and the value of the components as in the country of manufacture, it is not possible to relate these values to those of the locally bought out items and components manufactured by the automobile manufacturing unit itself. Even if it is assumed that the balance left out after deducting from the total pack values, the value of components not deleted represents the value of the components manufactured or locally bought out, these cannot be apportioned in terms of the values of the country of origin and the apportionment can be done only in terms of local value. It follows therefore that the apportionment of the other items too, namely, the imported components should be done in the same term in order to make the figures comparable. The apportionments in this table are therefore based on local values. Comparative figures for the latest period for which actual cost examination was conducted by our Cost Accounts Officers in terms of the total cost of the components excluding assembly charges are given in table 22 below.

TABLE 22

Comparative figures of percentage by value of imported, bought out and self-manufactured components

Vehicles	Imported components-finished and semi-finished together with customs duty & other charges	Indigenous bought out components-finished and semi-finished	Self manufactured components including cost of raw materials & finishing of semi-finished components	Total
1	2	3	4	5
1. <i>Hindustan</i> (1966-67)				
(i) Ambassador .	2.4	37.5	60.1	100.0
(ii) Bedford 167" W.B. Diesel Truck .	21.5	59.8	18.7	100.0

1	2	3	4	5
2. Premier (1965-66)				
(i) Fiat 1100 .	11.7	45.3	43.0	100.0
(ii) Kew Truck chassis with Perkin's en- gine . . .	5.0	71.9	23.1	100.0
(iii) Kew Truck chassis with P.A. made pe- trol engine .	11.3	52.2	36.5	100.0
(iv) Kew Bus chassis with Perkin's en- gine	5.1	70.7	24.2	100.0
3. Standard (1965)				
(i) Herald Saloon .	34.5	45.0	20.5	100.0
(ii) 1-Tonne vehicle .	54.6	37.9	7.5	100.0
4. Ashok (1965-66)				
Comet chassis .	18.5	59.0	22.5	100.0
5. TELCO (1965-66)				
(i) L—312-42 . .	14.6	36.9	48.5	100.0
(ii) L—1210-42 .	16.7	38.2	45.1	100.0
(iii) L—1210-52 .	16.3	38.3	45.4	100.0
6. Mahindra (1965-66)				
CJ—38 Jeep . . .	20.5	51.4	28.1	100.0
7. Simpson & Co.(1965-66)				
Engines—				
(i) P6V Bare Engine	17.3	56.5	26.2	100.0
(ii) P6V for Kew Dodge chassis .	17.8	54.5	27.7	100.0
(iii) P6V for Bedford chassis . . .	17.3	57.2	25.5	100.0

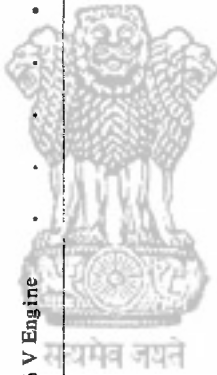
There are certain discrepancies between the figures given by the units and those arrived at by our Cost Accounts Officers. These are likely to be due to methods of calculation. There are numerous factors which enter into the items of cost, and the manner in which the figures have been worked out by the automobile manufacturers appears to be different from that of the Cost Accounts Officers. In the case of the latter most of the figures are for 1965-66 except for Hindustan Motors which are for 1966-67 and for Standard Motors which are for the year 1965. The following comments are based on the data set forth on the basis of the figures reported by our Cost Accounts Officers. In the latest year for which the information is available Hindustan Ambassador, Premier's Kew trucks as well as bus chassis with Perkins engine have the lowest import content *i.e.*, from 2.4 to 5.1. Premier's Fiat car and Kew truck chassis with petrol engine have the import content of 11.7 and 11.3 respectively. The highest import content is that of Standard 1 tonne vehicle which stands at the figure of about 55 per cent. According to the figures furnished by the units themselves the import content has decreased all round. In the case of the Fiat car it has come down from 51.1 in 1961-62 to 19.3 in 1965-66 and for Ambassador from 29.89 to 9.83. As regards components manufactured in their own factories Hindustan Ambassador is at the top of the list with 59.2 and TELCO following close behind, Fiat coming third in the line. The smallest percentage appears to be that of Standard 1 tonne vehicle. Premier's Kew truck with Perkins engine has the highest content of bought-out ancillaries, next in order being its bus chassis, Hindustan Bedford, Ashok Comet and Simposon's engine for Bedford chassis. Table 23 shows the pack value of finished and semi-finished components and parts imported per vehicle during the licensing period ending March 1963 and March 1966 and the percentage reduction in the latter as compared with the former.

TABLE 23

C. K. D. Pack Value of finished and semi-finished components per vehicle imported during the licensing period ending March 1963 to March 1966

Name of the Producer	Type of Vehicle	March							Percentage reduction Col. 6 over Col. 3
		1963	1964	1965	1966	Rs.	Rs.	Rs.	
1	2	3	4	5	6	7			
1. Hindustan Motors									
	A. Ambassador Car	1,900	1,730	1,500	1,150	89.5			
	B. Bedford Truck								
	(i) 120" and 167" W.B. Diesel Chassis	5,500	4,300	3,600	2,400	56.4			
	(ii) 179" and 167" W.B. Diesel Chassis	6,000	5,000	4,100	2,450	59.2			
	(iii) 216" and 167" W.B. Diesel Chassis	7,500	7,000	6,000	5,000	33.3			
	(iv) 120" and 167" W.B. Petrol Chassis with Power unit	7,500	7,170	6,600	5,450	27.3			
2. Premier Automobiles									
	A. Fiat Car	2,691	2,278	1,906	160	94.1			
	B. Dodge/Fargo								
	(i) 3-5 tonne Diesel Truck	3,473	3,103	2,628	637	81.7			
	(ii) 3-5 tonne Diesel Bus	3,473	3,103	2,148	635	81.7			
	(iii) 1-2 Light Petrol Vehicle	5,100	..	4,467	4,190	17.8			
	(iv) 3-5 Tonne Petrol conversion Truck	..	..	5,100	1,392	..			
	C. Meadows Diesel Engine	3,100	2,500	2,529	924	70.2			

3. Standard Motors	.	.	.	Standard Herald	.	.	.	.	2,615	2,591	1,709	860	67.1
4. Ashok Leyland	.	.	.	Comet-Finished, Semi-finished	.	.	.	.	7,100	4,400	3,464	2,200	69.0
									2,160	1,550	1,258	1,410	34.7
5. TELCO	.	.	.	L Model	.	.	.	.	5,032	3,750	2,735	1,875	62.7
				LP Model	.	.	.	.	4,200	3,175	2,835	2,125	49.4
6. Mahindra & Mahindra	.	.	.	CJ-3B Jeep	.	.	.	.	2,340	2,700	1,683	990	57.7
7. Bajaj—Tempo	.	.	.	Tempo 3 Wheeler	.	.	.	.	..	1,565	1106	745	..
8. Simpson & Co.	.	.	.	P 6 V Engine	.	.	.	.	855	651	646	497	41.9



13.10.1. The automobile ancillary industry has made a very significant contribution to the automobile industry during the three Plan periods. There are today a total of 230 units registered on the list of the D. G. T. D. Of these only 85 of the larger units responded to our questionnaire and an analysis of the sample available indicates that of these units only 12 were in existence before the First Plan, 19 units were set up during the First Plan period, 27 during the Second Plan period and the same number during the period of the Third Five Year Plan. It may be true that during the First Plan period most of the units came up to cater for the replacement market, but in the subsequent years, the chief incentive for the development of the ancillary industry in India was the manufacture of indigenous automobiles and the opportunity to supply original equipment as well as replacement parts for the indigenous industry. It was as a result of this development that there was significant increase in the purchase of original equipment from ancillary manufacturers as the following figures furnished by automobile manufacturers would show.

Producer	Vehicle	Value of components purchased from ancillary units expressed as % of total material cost	
		1961-62	1965-66
1	2	3	4
Hindustan Motors Ltd.	Ambassador	16.7	31.5
	Bedford : 167 WB Diesel truck	47.1	58.1

Producer	Vehicle	Value of components purchased from ancillary units expressed as % of total material cost	
		1961-62	1965-66
1	2	3	4
Premier Automobiles Ltd.	Fiat car . . .	21.9	41.7
	Kew truck with Perkins engine . . .	49.9	64.9
	Kew truck with Meadows engine . . .	34.8	36.6
	Kew truck with petrol engine . . .	24.2	42.7
	Kew Bus chassis with Perkins Engine .	50.5	62.8
	Kew Bus chassis with Meadows engine .	30.4	40.6
	Short wheel base chassis	14.0	21.8
Standard Motor Products.	Herald Saloon . . .	17.4	23.0
Ashok-Leyland	Comet chassis . . .	41.4	71.7
Telco . . .	L-312-42 . . .	19.1	26.1
	L-312-48 . . .	18.0	24.9
Simpson & Co.	Bare Engine . . .	29.4	36.5
	For Kew Dodge Chassis	27.5	33.8
	For Bedford engine .	31.3	33.9

It would be observed that without exception the quantum of indigenous components supplied by ancillary manufacturers has increased during for four year period for which these figures have been given.

13.10.2. In the case of a number of slow moving items of ancillary manufacture the replacement market is so small that it would have been extremely unprofitable to set up large scale units only for the parts replacement market. Of late the ancillary industry has developed not so much with a view to fulfill the replacement demand as for supplying the needs

of automobile manufacturers. The important factor which was conducive to the development of the automobile ancillary industry was the Government's policy of industrialisation and import substitution. It is gratifying to note that with the indigenous availability of components the automobile manufacturers came more and more to rely upon the supplies from ancillary industry and progressively gave up the items manufactured by them. Premier Automobiles has stated that out of ten items which were originally being manufactured by the unit it has already off-loaded five items and its continuance with the manufacturing of the remaining items is based on the grounds of assured deliveries, competitive prices and good quality. Demarcation has now been made as between items which may be manufactured by the automobile manufacturers on the one hand and ancillary manufacturers on the other and in the latter a further subdivision has been made as between the large scale and the small scale manufacturers.

13.10.3. The value of components, parts, assemblies and sub-assemblies locally purchased in 1965-66 over that in 1961-62 is given in Table 24.

TABLE 24

Value of components, parts, assemblies and/or sub-assemblies per unit locally purchased from 1961 to 1966

Sl. No.	Vehicle Model	1961-62	1962-63	1963-64	1964-65	1965-66	Percentage increase of Col. 6 over Col. 2
1		2	3	4	5	6	7
		Rs.	Rs.	Rs.	Rs.	Rs.	
1. Hindustan							
(i) Ambassador Car		1,617	2,215	3,059	3,217	3,672	127.1
(ii) 167" Diesel		9,508	12,293	12,971	13,199	14,292	50.3
(iii) 179" "		9,496	12,314	12,996	13,223	14,303	50.6
(iv) 167" Petrol		2,766	5,217	5,237	5,926	6,313	128.2
(v) 216" Diesel		9,674	9,891	11,978	12,377	12,652	30.8

1	2	3	4	5	6	7
2. Premier						
(i) Fiat Car	1,622	1,712	2,257	2,559	3,022	86.3
(ii) 109P6 Truck	10,205	10,424	11,325	11,949	12,606	23.5
(iii) 109 M4 Truck	10,615	7,697	7,260	7,185	7,721	(—) 7.3
(iv) 109 PA6 Truck	3,268	3,864	4,647	5,082	5,951	82.1
(v) 89 P6 Bus	10,035	10,603	11,159	11,540	12,306	22.6
(vi) 89 M4 Bus	10,241	6,999	6,920	7,217	7,441	(—) 27.3
(vii) Shank Wheel Base Units	1,432	1,749	2,094	2,225	3,149	119.9
3. Standard-Herald	1,549	1,538	2,067	2,292	3,233	108.7
4. Ashok-Comets	6,801	8,389	10,040	10,183	11,136	63.7
5. TELCO						
(i) L 312	5,769	5,769	7,655	8,594	9,822	70.3
(ii) LP 312	6,238	6,238	8,057	8,649	9,993	60.2
6. Mahindra & Mahindra						
CJ-3B Jeep	2,593	2,777	2,504	3,798	..	..
7. Bajaj-Tempo	..	..	..	..	..	..
8. Simpson & Co.						
(i) P6V Bare	1,383	1,822	2,022	2,025	2,002	44.8
(ii) Engines for Bedford chassis	1,556	2,023	1,979	1,966	1,942	24.8
(iii) Engines for Kew Dodge chassis	1,332	1,769	1,928	1,913	1,885	41.5

13.11 It will be seen from table 24, that the percentages of components procured from the ancillary manufacturers in 1965-66 stand relatively higher than five years ago.

13.12 We had requested the automobile manufacturers to furnish a detailed statement showing the number of automobile components and parts which were permitted to be

imported and are imported at present and the number expected to be deleted before the end of 1968. They have supplied this information. The D. G. T. D. has also given information relating to the components being imported for the different vehicles for the latest available period which is given in table 25 below.

TABLE 25

Particulars of imported components in respect of different Vehicles

A. Passenger cars

	Ambassador	Fiat	Standard Herald
Engine . .	Camshaft bearing liner; Carburettor; Chain tensioner; Main shaft interceptor.	Valve tappet; Thermostat.	Camshaft; Outer axle-shaft and flinger assembly.
Clutch . .	Clutch thrust bearing.	..	..
Transmission	Assembly gear shift lever.	..	..
Cooling . .	Water pump bearing assembly.	..	..
Fuel . . .	Petrol pump	..	..
Propeller shaft	..	Synchroniser flexible joint propeller shaft.	..
Rear axle . .	..	—	Differential case.
Steering. .	Steering rack assembly; Steering column tube assembly.	Complete steering assembly.	Steering assembly complete.

	Ambassador	Fiat	Standard Herald
Frame and chassis.	Bearings fasteners and miscellaneous items.	Pressure bonded bushes; Bearings (Seven types).	Lower wish bone brackets; All types of bearings; Fasteners.
Body and upholstery.	Back light glass; Wind screen glass; Button push locking.	Wind Shield glass; Fuel filter locks.	Doorvent KKD Kit; Rear deck KD assembly; Door hinge assembly; Wheel arch panel front; Wheel arch panel rear; Wheel arch panel inner; Door panel outer; Valence panel assembly; 'A' post assembly; Lock set assembly.
Instruments	Rim instrument dial.	..



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B. Commercial Vehicles—

	Bedford	K.E.W. Dodge	T.M.B.	Comet
Engine	Engine Diesel/petrol C.K.D. power unit mounting assembly.	Idle control assembly.	Piston rings; Governor without safety valve; Valve tappets.	Rear engine support; Timing back plate; Connecting rods; Cam shaft Gears timing; Tappets; Push rods; Damper; Crankshaft.
Clutch . . . . .	..	..	Clutch bearing.	..
Transmission . . . . .	..	Main shaft 4th speed bush.	..	..
Fuel . . . . .	..	Assembly thermostat.	Thermostat	..
Electrical	Windscreen wiper motor; Ignition and starter switch; Key and switch lock assembly.	Oil pressure switch.	Main light switch; Glow plug switch; Adapter.	..
Propeller shaft	Propeller shaft bearing support and bearing assembly.	..	Bracket centre bearing.	..
Suspension front . . . . .	..	..	Forging frons axle beats.	..
Rear axle	Axle housing and axle-tube LH/RH; Oil seal pinion shaft; Case differential; Cover differential case.	Bearing rear drive pinion	Rear axle supporting tube.	Crown wheel/pinion; Gear bevel; Axle shaft, All beam; Track rod; Axle arms and tube.
Steering	Tie rod, steering C.K.D.; Front cross member tube.	Steering assembly complete.	C.K.D. steering gear set.	Steering C.K.D.
Brakes with brake drums	Ball crank lever hand brake; Brake pipe assembly; Brake drum front; Hose assembly; Foundation assembly; Hydraulic components; Hand brake cable assembly.	..	Brake master cylinder; Brake valve; Wheel brake cylinder.	..

Frame with chassis	• • Bearings and fasteners.	Bearings-ball; roller and needle; Fasteners hub and wheel stud.	Bearings; Fasteners.	Frame side members; Boat rings; Fasteners.
Body & upholstery	• • Pocketlid lock; Body panels; Engine cowl panel and cover assembly; Crown and skirt panels; Fender LH/RH; wind screen glass.	• •	• •	• •
Instruments	• • Instrument cowl.	• •	• •	Driving plate; Trunnion assembly.



	Standard 1-Tonne	Jeeps CJ3B.	FC-150	Tempo 3 Wheeler	Tempo 4 Wheeler
Engine	Front engine plate assembly; Push rod; Oil pump assembly.	Valve tappet assembly; Rocker arm assembly; push Rod; Camshaft castings.	Valve tappet assembly; Rocker arm assembly; Camshaft; end yokes.	Crank shaft with conrods; Starter ring; Carburettor.	Crank shaft; Fan Starter ring; Air filter; Oil filter; Carburettor.
Clutch	Clutch thrust bearing; Top cover.	Clutch release bearing; Clutch control lever cable.	Clutch release bearing; Cable assembly; Clutch pedal lever to ball crank; Cable assembly ball crank lever to cross shaft; spring bolt.	Clutch lining; Clutch cable.	..
Transmission	Idle lever bracket assembly; Fork selector 3rd and top; Gear lever lower assembly; Gear Control shaft assembly; Mounting bracket gear change; Gears (all).	Shift levers forging; End yoke forging; Gear carrier housing axle.	..	Drive chain.	Gear box housing; Gear box cover; Main shaft synchroniser; Drive shafts; Gears.
Cooling	Water pump bearing.	Thermostat; Water pump bearing; Shaft and slinger.	Thermostat assembly; water pump bearing shaft and slinger.	..	..
Electrical	..	Light switch and circuit breaker.	Oil pressure signal switch; Light switch or circuit breaker assembly.	Ignition distributor.	Distributor.
Suspension Front	Front suspension unit; compensator unit assembly.	..	..	Front coil springs.	Torsion bar.
Rear axle	Pinion housing assembly; Taper roller bearing; Differential case assembly; Cross pin differential; Crown wheel bolts; Axle shaft.	..	Axle shaft; bearing tube; Gear carrier housing.	..	Differential housing; Differential gear; Crown wheel; Tube axle journal.

Steering . . .	Steering unit with column and wheel; Trunion bracket.	Steering assembly C. K. D.	Steering gear assembly CKD; Steering wheel; Steering ball crank.	..	Steering unit with drop arm; Tube support.
Brakes with brake drums.	Hand brake cable front.	..	Hand brake and lever cylinder assembly; Brake assembly; Hand brake cable and conduit.	..	..
Wheels . . .	Rear hub; Taper roller bearings.	..	Rear hub and brake drum assembly; Front hub and brake drum assembly.	..	Wheel joint
Frame with chassis	Post 'A' assembly; Reinforcement post; nuts, bolts and fasteners.	Taper roller and needle bearing; standard and special fasteners.	Roller bearing, taper roller bearing; needle roller bearing; fasteners.	Taper roller bearing; Fasteners.	Torsion bar; Bearings all types; Fasteners.
Body & Upholstery . . .	..	..	Front Doors L.H./R.H. Window regulator; lock door front & control; Fender left and right.	..	Curved windscreen; Body panels.

13.13 It will be seen from the foregoing table that the items being imported practically by all manufacturers are bearings of various types, fasteners, steering gear, rear axle tubes and curved glasses. In addition, there are other items such as carburettors, clutch release bearing, water pump bearing shaft and slinger, locks, valve tappets, thermostats, brake parts, some ferrous and non-ferrous castings, malleable castings, forgings for crank shafts, cam shafts long members of chassis etc. D. G. T. D. has informed us that establishment of capacity for manufacture of rear axle tubes and steering gear is under contemplation and that Ashok Leyland has not found it economical to instal equipment for pressing of long members in view of the relatively small production. In most of the remaining cases the items have been licensed for production in the country. However, due to the delay in implementation of the manufacturing programmes, imports have not yet been obviated. D. G. T. D. expects that within the course of the next two years these items will also be available from indigenous sources. D. G. T. D. has admitted that in the case of some ancillary items such as carburettors, rear axle tubes, steering mechanism, fuel pump, special types of bearings, fasteners and thermostats where capacity has been established, the production is not enough to meet the entire demand and imports have to be allowed to fill the gap. During the public inquiry the manufacturers brought to our notice their difficulty in obtaining from indigenous sources such parts the requirements of which were not very large although similar items were on the manufacturing programme of ancillaries. The manufacturers have informed us that they have set up special cells to investigate the possibility of obtaining from indigenous sources such parts as have hitherto been imported and vigorous efforts are being made to develop indigenous sources of supply.

13.14 The All India Automobile and Ancillaries Industries Association has however informed us that indigenous capacity has been established for the production of all components normally produced outside automobile factories. It has further stated that automotive castings and forgings which constituted one of the major gaps in the ancillary development and accounted for a large volume of imports of semi-finished items by the indigenous automobile industry has

also been filled and has claimed that all components of functional importance in the vehicle are manufactured in technical collaboration with reputed foreign firms. The Association considers that the emergence of duplication of capacities in the industries is the result of the early vertical growth of the automobile industry and also the ancillary manufacturers catering to the replacement demand, particularly of fast moving components. We are informed that such duplication of facilities exists in the case of radiators, springs, shock absorbers, silencers, universal joints, propeller shafts, castings and forgings. We also find that no conspicuous advance has been made in reversing the original vertical growth of the industry and even the official demarcation of parts to be manufactured by either sector seems to have not also met with the desired success.

13.15 A persistent complaint against the automobile industry in India is its vertical growth which perhaps is more due to historical reasons than due to deliberate design. In reply to our questionnaire almost all the automobile manufacturers have stated that as a matter of policy they would rather buy than make. We have, however come across the instance of Premier Automobiles to which a licence for expansion of capacity for manufacture of shock absorbers has actually been granted. This unit on its part has stated that originally it was manufacturing a number of items now reserved for ancillaries and it had the option to continue their manufacture; it has nevertheless off-loaded five items, namely, radiators, fuel tank, muffler, exhaust pipe and tail pipe. Hindustan Motors continues to manufacture radiators, pistons and pins, valves and starter ring gear and the reason given by it for continuing this policy is irregularity in quality and supply from ancillary industries. TELCO manufactures exhaust silencer assembly, fuel tanks, anchor plates, brake shoes, sheet metal parts, leaf springs etc. because according to it the prices quoted by ancillary manufacturers appeared to be unreasonable. Ashok Leyland manufactures lubricating oil filter for the reason stated by the unit that a filter of requisite quality and specifications is not available from any ancillary manufacturer. We have, elsewhere in this Report, commented on the desirability of off-loading as much manufacturing activity as possible by the automobile manufacturers to the ancillaries with mutual advantages to both.

13.16 The following table shows the number of units in the D. G. T. D.'s list which have been licensed for the manufacture of various important automobile ancillaries and those in production :

TABLE 26
Ancillary Industries Directorate

Main assembly	Item of Automobile ancillary	In production	Not in production	Total
1	2	3	4	5
1. Engine	Pistons	3	1	4
	Pistons rings	2	1	3
	Piston pins	1	3	4
	Caps (M.U.)	2	..	2
	Circlips	1	..	1
	Cylinder liners	5	2	7
	Oil seals	7	..	7
	Governor . . . . .	..	1	1
	Valves	5	..	5
	Tappets & valve guides	2	1	3
	Push rods . . . . .	..	1	1
	Oil pumps	2	..	2
	Filter elements inserts etc.	7	..	7
	Gaskets	3	..	3
	Thin wall bearings	3	..	3
	Bimetal strips	2	..	2
	Thick wall bearings	1	..	1
2. Clutch	Clutch assembly	5	2	7
	Clutch plates	2	2	4
	Clutch facing	3	..	3
3. Transmission	Gears	3	1	4
4. Cooling	Water pumps	1	..	1
	Radiators	6	..	6
	Caps (M.U.)	(See under engine)		

1	2	3	4	5
5. Fuel	Multicylinder pumps	1	..	1
	Bundy tubing . . . . .	..	1	1
	Carburettors	3	..	3
	Fuel pumps	4	1	5
	Nozzles, elements etc.	3	1	4
	Caps (M.U.)	(See under engine)		
6. Electrical	Spark plugs	2	..	2
	Wire harness, pannel harness . . . . .	..	3	3
	Dimmer switches.	1	..	1
	Switches	4	..	4
	Flasher units	3	..	3
	Ignition switch	1	..	1
	Lamps various	8	1	9
	Horns	7	1	8
	Horns relay	3	2	5
	Horns rings & Button	1	..	1
	Ignition coil	3	..	3
	Voltage regulator	6	..	6
	Distributor	3	..	3
	Contact points . . . . .	..	2	2
	Rotors	1	1	2
	Condensors	1	..	1
	Solenoids	2	..	2
	Wiper motor	3	..	3
	Wiper blades & arms	1	..	1
	Dynamo	4	..	4
	Starter motor	4	..	4
7. Exhaust	Silencers	1	..	1
8. Propeller shaft with universal joints.	Universal Joints	2	3	5
	Propeller shaft	1	..	1
9. Suspension front including shock absorbers & springs.	Shock absorbers	5	..	5
10. Steering	Tie rod ends	3	2	5
	Steering linkage	1	..	1
	Steering gear	1	1	2

1	2	3	4	5
11. Brakes with brake drums.	Bundy tubing (M.U.)	(See under fuel)		
	Parts of brake assembly	2	..	2
	Brake assembly and servo mechanism	3	..	3
	Hoses various kinds	5	2	7
	Brake lining	4	1	5
	Air container	1	..	1
	Brake drum assembly	3	2	5
12. Wheels	Hub caps	1	..	1
	Wheels	2	..	2
	Tube valves	1	1	2
13. Frame and chassis	King pins etc.	7	1	8
	Pressings	2	1	3
	Axle and Axle shafts	3	2	5
14. Body & Upholstry	Window channels weather strips . . . . .	..	1	1
15. Instrumentation	Instruments	2	..	2
	Control cables	2	1	3

(M.U.—Multiple uses. Items marked with these letters have been repeated).

13.17. The All India Automobile and Ancillary Industries Association has stated in its memorandum dated 24th November 1966 that original equipment components bought out from the indigenous ancillary industry account for not more than 20 per cent of the ex-factory price of vehicles assembled in the country as against 60 to 70 per cent in other advanced countries. We are constrained to remark that these observations are not borne out by facts. In so far as the manufacturers are concerned they have furnished data which is set forth in Table 21 and shows that for the year 1965-66 the percentage of components purchased by ancillary suppliers was 22 per cent in the case of one commercial vehicle, between 25 and 30 per cent in the case of six vehicles, between 30 and 40 per cent in the case of five vehicles, between 40 and 50 per cent in the case of four vehicles, between 50 and 60 per cent in the case of one vehicle, between 60 and 70 per cent for two vehicles and above 70 per cent in the case of one vehicle.

13.18. The analysis made on the basis of detailed costing made by the Cost Accounts Officers and set out in Table 27 shows that the contribution of ancillary manufacturers in India accounted for 35 to 40 per cent in the case of five items, 40 to 50 per cent in the case of two items, 50 to 60 per cent in the case of seven items and above 70 per cent in the case of one item. On the basis of the actual cost data of the total value of the material cost as shown in the statement in Table 27 the percentage of the value of the indigenous finished and semi-finished components was 43.35 per cent of the total material cost of the automobiles produced during the costed period as the following figures would show :—

TABLE 26A

Value of indigenous semifinished and finished components to total ex factory cost excluding assembly administration and royalty for the costed period

Unit	Period of accounts	Cost of indigenous semi-finished and finished components	Total ex-factory cost (excluding assembly, admn. and royalty)	Percentage of 2 to 3
1	2	3	4	5
		Rs./lakhs	Rs./lakhs	
1. Hindustan Motors .	1966-67	1,418.54	3,435.59	41.29
2. Premier . . .	1965-66	1,138.36	1,847.96	60.71
3. Mahindra & Mahindra.	Six months ended 30-4-66.	238.33	464.90	51.26
4. Ashok-Leyland	Eight months ended 31-5-66.	307.82	576.95	59.54
5. Standard Motors .	1965	155.35	346.20	44.47
6. Telco	1965-66	1,779.86	4,982.72	35.72
TOTAL FOR INDUSTRY .		5,038.26	11,621.32	43.35

13.19. These figures would show that the contribution of the automobile ancillary industry as suppliers of original equipment has been considerable. Premier Automobiles purchase the largest proportion of ancillary equipment; the next are Ashok-Leyland and Mahindra and Mahindra. Figures for six months production only have been included for the latter and only for eight months production for the former. If figures were available for these units too for the whole year the weighted average for the whole industry would be significantly higher. It is expected that the contribution of the ancillary industry has increased further during the last two years. Almost all the manufacturers have stated with one voice that wherever satisfactory supplies of components from indigenous industry are available, they not only refrain from manufacturing such components but also off-load their existing manufacture on to the ancillary industry and we have no reason to doubt the veracity of these statements. There is also ample evidence to show that this is being done; there are however only a few exceptions where the inclination to off-load does not appear to be prominent as in the case of TELCO which of all the units has the smallest quantum of indigenously purchased components. The impression therefore that there is any attempt on the part of automobile manufacturers to continue to or take over the manufacture of what could be supplied by the indigenous ancillary industry or that there is an effort at vertical integration in the automobile industry is erroneous and based on inadequate appreciation of the facts and data.

13.20 In view of the fact that considerable capacity for the manufacture of ancillaries has now been set up, we also consider it desirable to reduce progressively the overlapping of production as between the automobile manufacturers and the ancillary units. As the requirement of the automobile manufacturers of such items increases and their output decreases as a result of the depreciation of plant and machinery it would be desirable to meet the balance of the requirements from the ancillary manufacturers with a view to handing over all such production to the latter eventually. It is also suggested that in future care may be taken to ensure that no further expansion of capacity is allowed to automobile manufacturers for items for which capacity exists in the ancillary sector.

14.1. The Tariff Commission Report (1956) made an assessment of the progress of manufacturing programme on different units and arrived at the percentage of indigenous content in Studebaker trucks of Hindustan Motors and in Dodge/Plymouth/Desoto cars, Dodge/Desoto/Fargo petrol trucks and Dodge/Desoto/Fargo Diesel trucks of Premier Automobiles. The method adopted for calculating the indigenous content was :

- (i) to add up the cost of such items as tyres, tubes, batteries and trim materials which were being produced in the country already and which were not allowed to be imported,
- (ii) of all items deleted from the C. K. D. packs by establishment of indigenous manufacture of the same,
- (iii) to total this up [(i) + (ii)] and then work out this total as a percentage of the value of the complete C.K.D. pack.

All the three values were in terms of the ex-factory price of the relevant items in the country of origin. Imported raw material was not taken into account nor were semi-finished components and the value of these formed part of the indigenous content in terms of percentage.

14.2. The Jha Committee improved upon this formula by adding to the value of imported components the cost of semi-finished components where these had been imported, thus allowing in the indigenous content the cost of conversion only. Here again the calculations were to be made on the basis of certain stated principles. First, the ex-factory price of the complete vehicle in the country of origin was to be ascertained; secondly, the ex-factory price of the components both finished and semi-finished still imported was to be ascertained and then the latter was to be worked out as a percentage of the former namely, the ex-factory price of the complete vehicle. The balance was considered to represent the extent to which indigenisation had been achieved, irrespective of these two values in India in terms of rupees. This

formula overlooked the import of finished as well as semi-finished components imported by ancillary manufacturers for incorporation into the assemblies supplied by them. We are informed that at its meeting held on the 5th February, 1968 the Development Council for Automobile and Allied Industries confirmed that the existing formula should continue for assessment of indigenous content of vehicles manufactured in India. The cost examination conducted by our Cost Accounts Officers shows that for the actual period the cost of materials included cost of imported finished components in the C. K. D. pack, of finished components outside the C. K. D. pack, of semi-finished components, the value of indigenous purchases of finished or semi-finished parts, and raw material and cost of parts manufactured in the unit. The percentages of these items in respect of some of the vehicles were as given in table below.



14.3. In some of these cases the value of the finished imported parts is significant, going upto 29.7 per cent and would affect the deletion percentage if these are overlooked. Again, the semi-finished components are invariably purchased from sources other than those for the supply of the C.K.D. pack and consequently the ex-factory price of the semi-finished components cannot be related to that of the finished component in the hypothetical C.K.D. pack.

14.4. The cost to the country in the form of foreign exchange for the manufacture of automobile would mainly include the following items :

- (1) Cost of components imported, finished and semi-finished within or outside the C. K. D. pack by the vehicle manufacturers.
- (2) Cost of raw material imported.
- (3) Amortization on cost of imported plant and equipment as well as on loans.
- (4) Royalties to foreign collaborators.
- (5) Salaries and emoluments paid in foreign exchange.

14.5. The cost in terms of this classification will need to be determined not only for the unit manufacturing automobiles but also for the ancillaries too. We have seen from the few examples given above that the cost of indigenously purchased ancillaries and parts constitutes from 37.9 per cent to 71.9 per cent of the total cost including cost of manufacture. If material costs alone were to be considered this percentage would be much higher. Any estimation of import content of the vehicle which excludes from its purview almost half of the material used would be unrealistic.

14.6. In the case of vehicle manufacturers, particulars in respect of all the items mentioned above can be worked out on the basis of the cost data ascertained for the actual period of costing. But while costs in respect of finished and semi-finished component, raw materials and royalties have been isolated and shown separately, those in respect of amortization of imported plant and equipment and foreign loans,

and emoluments paid in foreign exchange have not been isolated. If the actual burden on foreign exchange resources has to be estimated these costs, as well as costs of similar items for ancillary manufacturers will have to be taken into consideration.

14.7. The D. G. T. D. as well as the units have furnished particulars of the extent of deletion based on the formula enunciated by the Jha Committee. According to this formula the ex-factory price of the entire vehicle in C. K. D. form has to be taken and also the ex-factory value of the finished and semi-finished parts supplied to the Indian manufacturer. The latter has then to be worked out as a percentage of the former. This implies that both the values should be available. The percentages furnished to us, however, have not been verified. Assuming that these figures are based on verified calculations, the disparity between the figures furnished to us on the basis of the ex-factory price in the country of origin and those mentioned in paragraph above based on the ex-factory cost in India for the same item would be apparent from the comparison of columns 3 and 15 in table No. 27.

14.8. Since there were no imports of C. K. D. pack in the case of items 1 (i), 2 (ii, iii, iv), and 4, the figures given by the D. G. T. D. do not appear to have been worked out on the formula purported to have been adopted by it. The value of the undeleted parts being constant there is bound to be fluctuation only in respect of deleted parts. The percentage value of the undeleted parts will therefore fluctuate in inverse proportion to the value of the deleted parts. Consequently, if the value of the deleted parts is lower the percentage of the undeleted parts will go up. Conversely if the value of the deleted parts is higher the percentage of the undeleted parts is bound to go down. It has been admitted on all counts, without a single exception that the ex-factory cost of the deleted components is higher in India than it is in the country of origin. As a result the percentage of the undeleted parts based on the value of the deleted parts in India should be lower than the figures indicated by the D. G. T. D. But as the comparative analysis shows the figures furnished by the D. G. T. D. do not give a correct picture.

14.9. At the time of the inquiry by the Jha Committee in 1960, the emphasis was placed on the indigenous manufacture of components irrespective of the import content of the raw materials used for such components or the foreign exchange required for the plant and machinery together with the other commitments needed for the manufacture. To a large extent this has been achieved. It is now therefore desirable to shift the focus of attention from manufacturing progress i.e. indigenisation at the final stage of manufacture to the cost of the automobile industry to the country in terms of foreign exchange so that its gradual or faster reduction can be planned. It would for this purpose be desirable to undertake an analysis on the lines indicated earlier not only for the automobile industry but also for the ancillary industry with a view to better planning for making raw materials available from indigenous sources in future. In the meanwhile, in order to determine the import content of the material cost of the vehicle it would be desirable to continue to use the formula enunciated by the Jha Committee with the modifications that the total value of the completely knocked down vehicle should consist of the following items :

- (i) C. i. f. value of the imported c. k. d. pack.
- (ii) C. i. f. value of the finished components outside c. k. d. pack.
- (iii) C. i. f. value of semi-finished components outside c. k. d. pack.
- (iv) Value of locally purchased finished and semi-finished components.
- (v) C. i. f. value of imported raw materials.
- (vi) Value of indigenous bought out raw materials.
- (vii) Cost of manufacturing in the automobile unit.

This value should be adopted as the ex-factory value of the completely knocked down vehicle. The total of the items from (i), (ii) and (iii) may be subtracted from the value of the vehicle and the residue should be regarded as representing the extent of indigenisation. This would not take into account the import content in the locally finished and semi-finished bought-out items, the value of the imported raw material and the cost of amortisation of imported plant and equipment, servicing of foreign loans, royalties and licensing

fees etc. to foreign collaborators and salaries and emoluments paid. However, as a rough and ready method of determining the extent of indigenisation or conversely that of degree of import content this may be adopted as a practical formula.

14.10. It has been mentioned above that it would be desirable at this stage of development of the automobile industry to examine the incidence of foreign exchange requirement for the automobile industry. Certain inquiries have been made in this connection and the particulars of foreign exchange utilised by the various units during the previous five year period on raw materials and components and the simple averages per vehicle of the foreign exchange utilised were as follows :

TABLE 28

Foreign exchange utilised by vehicle manufacturers on raw materials and components

Name of the producer	Foreign exchange allotted from 61-62 to 65-66 (in thousand Rs.)		No. of vehicles produced	Average cost per vehicle	
	Rs.				
1. Hindustan Motors	.	.	28,34,99	90,464	3,134
2. Premier Automobiles	.	.	29,77,44	61,225	4,864
3. Standard Motors	.	.	4,56,06	17,395	2,621
4. Ashok Leyland	.	.	16,42,15	16,240	10,112
5. TELCO	.	.	47,78,41	70,625	6,766
6. Mahindra & Mahindra	.	.	12,32,09	46,006	2,895
7. Bajaj Tempo	.	.	1,64,20	5,952	2,766
8. Simuson & Co.	.	.	5,22,67	39,934	1,309

14.11. As already stated these amounts relate only to the foreign exchange utilised on components and raw materials by automobile manufacturers only and do not include foreign exchange utilised towards various payments to collaborators, payments on account of loans and interest and payments of dividends to non-resident share-holders, utilisation for purchase of replacement parts and on travels abroad. The figures supplied by the D. G. T. D. for the same years are as follows :

	(Rs. in lakhs)
1961-62	3242.71
1962-63	2760.33
1963-64	2417.60
1964-65	3074.12
1965-66	2121.75
TOTAL	13616.51

14.12. The total of the figures furnished by the D.G.T.D. comes to 13616.51 lakhs while figures of utilisation furnished by the different manufacturers come to 14708.10. The D. G. T. D. and the Ministry of Industrial Development have informed us that they do not possess full details of foreign exchange spent under different heads and suggested that the individual automobile manufacturers would be in the best position to give us details. We have therefore adopted the figures furnished by the manufacturers. We also tried to collect certain information about the foreign exchange spent by the automobile industry from the Reserve Bank of India, but could not get the necessary information.

14.13. The simple average of the amount spent per vehicle by each of the automobile manufacturers ranges from Rs. 2,661 to Rs. 10,112. The average is likely to be much higher if expenditure on other items which have not been included is also taken into account. We would therefore recommend that the Ministry of Industrial Development and Company Affairs may take steps towards co-ordination for the collection of data with regard to utilisation

of foreign exchange through the different departments of Government and to maintain records of relevant figures in respect of different items including ancillaries in order that suitable measures may be taken for the reduction of the incidence of foreign exchange spent on the manufacture of automobiles.



CHAPTER V

QUALITY, STANDARDS AND RESEARCH

15.1. Quality is to be understood with reference to the minimum standards of performance of the automobiles to the satisfaction of consumers.

15.2. In its last Report (1956), the Commission while reviewing the quality of automobiles assembled in India, observed that there had been a gradual improvement in it since 1954. There were, however, a few complaints in respect of some vehicles which mostly arose out of failure of inspection at the works. Frequent complaints were in respect of Hindustan Landmaster and the Commission recommended that the manufacturer of this vehicle, namely the Hindustan Motors, should tighten up inspection in its machining and assembling shops, arrange for a careful scrutiny of the purchased components and take further steps to improve the quality of its castings.

15.3. In 1960, the *Ad Hoc* Committee which studied the working of the industry, while expressing satisfaction on the whole at the absence of complaints about the performance of most of the vehicles produced in the country, however, observed that sufficient care was not being taken to avoid minor but irritating defects creeping in at the assembly stage which could have been easily detected, had there been an adequate system of inspection and check before the vehicle left the factory.

15.4. As the current inquiry was in progress, we received a communication from the Government stating that a Committee had been set up under Section 15 of the Industries (Development and Regulation) Act, 1951 to make a full and complete investigation into the circumstances in which the quality of motor cars produced in the country had deteriorated and to suggest remedial measures. The Report of this Committee has now been published. The Ministry of Industrial Development & Company Affairs has, however, suggested that we should also, in a broad and general way, look into this aspect in the context of our present inquiry.

15.5. Passenger cars

15.5.1. We sought the views on the quality of vehicles from individual car owners, dealers and fleet owners and their association as well as from the D. G. T. D. However, the overall response to the questionnaire from individual car owners was somewhat disappointing in as much as only about a hundred replies were received against 800 questionnaires sent out. Of these, 44 were from owners of Ambassador car, 29 from those of Fiat car, 16 from those of Standard 10/Herald car, and the rest related to other earlier models. Of these again, a sizeable number—33 Ambassador car users, 24 Fiat car users and 10 Standard car users—have categorically stated that the quality of these cars had deteriorated during the last ten years. Information about defects in automobiles has also been received from the dealers and the manufacturers themselves, not to speak of the D.G.T.D. These are grouped together sourcewise and vehiclewise as under :—

15.5.2. *Users:* The nature and number of complaints made to us by users against each type of car are given in Table No. 29.



TABLE 29
Number and nature of complaints from car users

Part or assembly or sub-assembly	Ambassador	Fiat	Standard
1. Engine	Engine goes on moving after switching off . . . 1 High oil consumption . . . 6 Noise in engine . . . 2 High petrol consumption . . . 3 Bearing failure . . . 1 Accelerator cable sticks . . . 2 Lack of compression . . . 1 Oil not properly distributed . . . 1 Oil leaks . . . 3 Black smoke from Exhaust . . . 1	High petrol consumption . . . 1 Engine not tuned properly . . . 6 Engine works when switched off . . . 3 Engine stops when clutch pedal released . . . 2 Engine does not pick up Performance bad . . . 1	High oil consumption . . . 1 Improper fitting of pistons . . . 1 High petrol consumption . . . 1
	21	11	3
2. Clutch	Clutch shudder . . . 4 Premature wear of clutch lining in one year . . . 1 Clutch defective . . . 2 Clutch noise . . . 1	..	..
	8		

Part or assembly or sub-assembly	Ambassador	Fiat	Standard
3. Transmission	Transmission defective Crack in gear box Juddering while changing gear Gear lever broken Gear gives trouble	1 Reverse gear sticks 1 Synchronising cone defective 1 1 3 7	1 Transmission noise 1 Failure of bush 1 Gear does not engage 2 3
4. (i) Radiator & Hoses.	Water comes to boil	1	Hose cracked 1
5. Fuel			
(i) Tank and pipes			
(ii) Carburettor	Gives trouble	1	Noise in tank 1
(iii) Fuel Pump	Defective	3	Overflowing 1
		4	2
6. Electrical			
(i) Starter	Does not work	1	..
(ii) Dynamo	Armature burnt	1	..
(iii) Distributor	Rotor cracked	1	Water in Distributor 1
(iv) Wiring Harness and light.	Wiring burnt	1	Head and Tail lights fail 4
	Head and Tail lights fail	4	Bad bulbs, lights fail 2
	Light switch defective	2	Light switch defective 1

(v) Horn	Does not work	2	Not blowing	1	Low pitch	1
	Points defective	1				
	Continuous blowing	1				
(vi) Battery	..		Drains out	2	..	
(vii) Spark plugs	Oils on plugs	1	..		Less durable	1
(viii) Other Elect. parts.	Loose Terminals	1	Wiper gives trouble	1	Wiper gives trouble	1
	Electrical failure	1			No fuse box found	1
		17		10		6
7. Exhaust	..		Silencer requires frequent replacements		Smoky exhaust	1
			Exhaust pipe corroded		Less durable	1
				13		2
8. Propeller shaft	..		..		Universal joint cross wears out	1
					Universal joint not protected	1
					Defective	1
						3
9. Suspension Front	Shock absorber bushes wear out	6	Shock absorber defective		..	
	Suspension defective	5	Springs loose	1		
	Rubber bushing bad	4	Front suspension gives trouble	3		
		15		5		

Part of assembly or sub-assembly	Ambassador	Fiat	Standard
10. Rear Axle	Differential noisy 9 Crown wheel pinion bad 2 Differential broken 1 <hr/> 12	..	Design defective Humming noise in differential 2 1 <hr/> 3
11. Steering	Steering rattles, noisy, shaking, defective 12	Covering over steering wheel gives way 1	..
12. Brakes with brake drums.	Master cylinder rubber buckets defective 1 Brakes don't work 1 Stud breaks 2 Foot and hand brake weak 1 <hr/> 5	Spring broken 1 Flexible pipe damaged 1 <hr/> 2	Brakes jammed 1 1 <hr/> 1
13. Wheels			
(i) Tyres and Tubes	Tyres wear out in 3 months 2	Quality bad 1 Wear out early 2 Cracks 1 <hr/> 2	Wear out unusually early 3 1 <hr/> 3
(ii) Wheels	Bearings defective 1 Road grip poor 1 Alignment defective 8 <hr/> 10	Bearing noisy, wear out Alignment bad 2 Caps loose 1 Rims bent 1 <hr/> 5	Alignment bad 3 1 1 1 <hr/> 3

14. Frame and chassis	Broken Front axle	3	..	..	13	Paint poor	5
15. Body with upholstery	Body and doors rattle	15	Thin sheets used	..	13	Poor performance	1
	Paint poor, defective, shoddy, peeling off, etc.	16	Pant comes off, chipping, fades etc.	..	13	Tin sheets	1
	Glasses defective	2	Body and doors rattling	..	13	Plating does not last	1
	Rear seat rattle	1	Nickel plated parts have to be replaced	..	4	Body rattle	1
	Bad welding	2	Doors not fitting properly	..	3	Seating arrangement bad	2
	Doors not fitting	2	Front seat uncomfortable	..	1	Seat springs soft	1
	Thin sheets used for body	2	Locks bad	..	3	Door locks bad	1
	Corrosion of body sheets	1	Locks bad	..	1	Doors not closing	1
	Locks bad	4	Sheets corroded	..	5	Bad upholstery	1
	Bad workmanship	10	Bad workmanship	..	2	Mirror falls off	1
	Alignment of Dicky	2	Bumpers rusting	..	12		
	bonnet defective	1	General performance	..	2		
	Seat springs weak	1	poor	..	2		
	Cushion padding changed from rubber to jute	1	Front and rear glasses defective	..	2		
	Defect in ashtray fitting	1	Bad upholstery	..	1		
		1	Bonnet and boot lid defective	..	3		
		59			76		16
16. Instrumentation	Speedometer defective	1	Milometer and speedometer out of order	..	2	Dashboard poor	1
	Fuel Gauge not working	3	Fuel Gauge defect	..	2	Fuel gauge not accurate	1
	Trafficator not working	2	Instruments poor	..	1		
	Clock out of order	2	Dashboard leaks	..	1		
	Noise in dashboard	1	Oil gauge stopped	..	1		
		9			7		2

15.5.3. We have received information from the D. G. T. D. in respect of complaints received by it from car users in the month of January 1967 which is given in the Table No. 30.



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TABLE 30

Complaints received by D. G. T. D. from car users in January 1967

Part or assembly or sub-assembly	Ambassador	Fiat	Standard
1. Engine	Noise, Smoke, etc. High fuel consumption Defect in main bearing	56 Defects in engine 38 High petrol consumption 11 105	9 Engine defects 3 12 3
2. Clutch	Clutch defects	18	..
3. Transmission	Defects in Gears/Gear box	40 Defects in gear box	7 ..
4. Electrical	(i) Starter (ii) Dynamo (iii) Horns (iv) Wiper	11 Starter defects 11 Dynamo defects 24 Horns defects 7 Wiper defects 53	10 ..
5. Exhaust	Exhaust & silencer pipe defects	10	..

Part or assembly or or sub-assembly	Ambassador	Fiat	Standard
6. Suspension front	Shock absorbers .	11 ..	..
7. Rear axle	Defects in Differential	36 ..	..
8. Steering	Defects in steering mechanism	32 Defects in steering mechanism	..
9. Brakes with brake drums.	Defects in brakes	17 ..	Defects in Brakes . 2
10. Wheels	..	Wheel bearings defective. . .	..
11. Body and upholstery	Paint defects	50	2
	Rattling, doors, handles, body locks	50 Door rattling . . .	9 Door rattling .
	Glass fittings	70 Paint defect . . .	8 Defective paint .
		14 Glass fittings defects	7 Defects in seats, seat springs .
		134	5
		29	6

15.5.4. *D. G. T. D.*: The number of complaints received by the D. G. T. D. from car users in 1965 and part of 1966 in respect of each type of passenger car as reported by it was as under :

Year	Make of car		
	Hindustan Ambassador	Fiat	Standard
1965	237	58	54
1966 (upto 30-11-1966)	617	37	36

It may be seen that the number of complaints received by us and those received by the D. G. T. D. in 1965 are broadly in the ratio of the cars produced by the different manufacturers. While the sudden spurt of complaints received in 1966 by the D. G. T. D. against the Hindustan Ambassador may perhaps indicate that the users had relatively more complaints to make against this car than against others, it must also be noted that the production and therefore the number of users of this car are also very much more than those of other cars.

15.5.5. *Automobile Dealers*: Particulars of the defects communicated to us by the automobile dealers are given in the Table No. 31.

TABLE 31

Particulars of defects communicated by automobile dealers

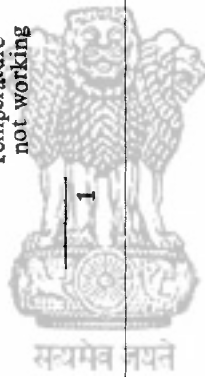
Part, sub-assembly or assembly	Ambassador	Fiat	Standard
<i>Nature of defect</i>			
1. Engine			
• High oil consumption	•	4 High Oil consumption	2 Piston and rings defective
Oil leakage	•	2 Piston Damage	2 High Oil consumption
Excessive smoke	•	1 Fan belt damaged	1 Overheating
		Over heating	2 Oil leakage from timing cover
Failure of bearings		1 Oil leakage	1
Noise in bearings	•	1 Damage to oil seal	1
		Ring Gear teeth worn	2
		9	11
			4
2. Clutch			
• Clutch shudder	•	1 Clutch shudder	1
		Pressure plate broken	1
		Pedal rattling	1
			3

3. Transmission	Defective casting of Gear Box	1	Noisy Gears	3	..	
	Stiffness of gear	2	Premature failure and breakage	2		
	Oil leakage	1	Lever knobs breakage	2		
	Gear box defects	3	Gear box mounting	1		
	Gear lever broken	2	bad.			
		9		8		
4. Cooling						
(i) Radiator & Hoses	..				..
(ii) Water pumps	..		Water pump noisy	1	..	
5. Electrical						
(i) Starter	Starter defective	1			Starter defective	1
(ii) Dynamo	Armature bushes damaged.	1			..	
(iii) Distributor	..		Points pitted	1	..	
(iv) Wiring harness and lights.	..		Switch broken	2	..	
(v) Horn	Relay failure	2	Horn not blowing	1	Horns defective	2
(vi) Spark plugs	Elect. parts required	1	Threads misaligned	1	..	
(vii) Other electrical defects	frequent repair	1	Switch breakage	1	Flasher defective	1
	Voltage regulator defect	1	Ignition switch defect	1		
	Flasher units fail	2	Flasher not working	1		
			Wiper arm comes off	3		
		8		11		4

Part, sub-assembly or assembly	Ambassador	Fiat	Standard
6. Exhaust . . . . .	..	Noise from silencer Silencer defective and fails	1 3 <hr/> 4
7. Suspension front	Noisy suspension	1 Shock absorbers fail weak in action	Shock absorbers defective 1 2
8. Rear axle	Low grade casting Noisy differential Defective differential Premature failure of crown wheel and pinion	1 Noise in differential 5 Spring shackle bushes worn 3 Premature failure of pinion	3 Rear axle shaft broken Differential mounting plate broken 1 1 1 1 <hr/> 10
9. Steering	Steering rattles	6 Steering linkage rattle Steering tight Tie rod end noisy Steering Wheel warped	1 1 1 1 <hr/> 4
			<hr/> 2

10. Brakes with brake drum.	Brake drums defective	1	..	
	Brake pedal stiff	1		
	Noise in brakes	1		
		3		
11. Wheels	Wheel alignment out	1	..	
	Wheels wobbling	2		
	Wheel alignment defective	1		
	Hub cap clips breaking off	4		
		7		
12. Body and Upholstry.	Paint defective, peeling off	4	Paint defective	2
	Body and doors rattle	2	Rear view-mirror bad	1
	Bad welding	2	Water leaking	1
	Water leaking	1	Plating bad	1
	Thin sheet metal	1		
	Paint defect, fades, chips etc.	3		
	Door remote	4		
	Control defective	4		
	Roof upholstery falling.	2		
	Plating peeling off	1		
	Door not fitting properly	2		
	Body and doors rattle	4		
	Glass raising mechanism defective.	2		
	Dust entry in body	3		
	Poor workmanship	4		
	Water leaking	1		
		26		
	10	5		

Part, sub-assembly or assembly	Ambassador	Fiat	Standard
13. Instrumentation	Speedometer defective	1	Speedometer defective 2
	Speedometer not work- ing	1	Speedometer defective 2
	Fuel gauge not work- ing	1	Fuel gauge defective 1
	Temperature gauge not working	1	1
		1	6
		1	3



15.5.6. Manufacturers :

15.5.6.1. The producers of automobiles receive complaints about the quality of their products through the D. G. T. D. or their dealers or directly from the customers either in general form or as warranty claims. Besides, the Association of Indian Automobile Manufacturers gets vehicle reports from users and directs these to the manufacturers for their attention. The Association has stated that whatever complaints it had received were referred to the respective manufacturers for necessary action. We had requested the automobile manufacturers themselves to furnish information regarding the components and accessories against which they have received complaints and the action taken by them to rectify these. This is analysed below :—

15.5.6.2. *Ambassador Car* : Hindustan Motors received 624 complaints through the D. G. T. D. during 1966. It gets approximately 8000 complaints yearly from dealers or directly from customers for its passenger cars and commercial vehicles. These relate, among others, to the engine (porous cylinder lock, distorted gasket, etc.), teeth of gears being chipped off, wrong design of the brake, loose adjustment of steering, horn not blowing, self-starter not operating, sagging of seat springs due to poor quality, tarnished plating, defective paint, inoperative luggage boot lock, short circuit of ignition coil and flasher unit etc.

15.5.6.3. *Fiat 1100 car* : Premier Automobiles has received complaints about the failure of exhaust muffler and to overcome this, it has introduced, since February 1967, the single indirect exhaust system in the place of the dual muffler system hitherto followed. Other complaints received are about running down of battery due to late charging, wearout of stabiliser bushes, defects in speedometer, transmission system, door glass handles, rear view mirrors, door rattling, body finish, dust entry inside the body etc.

15.5.6.4. *Standard 10 car* : The Standard Motors has received complaints about the paint work, oil consumption, clutch defects, defects in instruments and electrical parts etc.

15.6. Commercial vehicles :

15.6.1. As regards commercial vehicles, the Commission issued a special questionnaire to about 140 fleet owners and State Transport Undertakings and 30 Consumer Associations. Replies were received from only 38 fleet owners and 5 Associations.

15.6.2. *Fleet-owners* : The complaints received from this source about the quality of commercial vehicles are analysed in the Table No. 32.



Part, sub-assembly or assembly	Jeeps	Bedford	Dodge	TMB	Ashok Leyland
3. Transmission	..	Gear box defective components break.	2 Breakage of gear teeth and other defects Gear lever broken.	4 Shifting break.	1 Premature failure of main gear. 1 Speed change lever has sign defect. 1 Locking plates screw broken. 3 Gear box defective.
4. Cooling :					
(i) Radiator Hose	Leakage in Radiator.	..
(ii) Water Pump	Failure of water pump at low mileage.	..	..
5. Fuel :					
(i) Carburettor	..	Not working properly.	..	..	..
(ii) Fuel Pump	Locating of Fuel pump faulty.	..	Does not work properly location of fuel. 1 Filters inconvenient. 1 Filters setting clogged.
					3



6

6

6

6. Electrical :

(i) Starter	..	..	Starter out.	burning	1	Starter gives trouble.	1	Starter out	burning	1
	..	..						Location defective resulting in damage.		1
(ii) Dynamo	..	..	Failure at low mileage.	at low	1	..	..	Commutator burnt out.	burnt	1
	..	..	Key becomes loose.	becomes	1					
	..	..	Armature shorting.	shorting.	1					
(iii) Other electrical defects.	..	..	Failure of electrical parts.	Failure of electrical parts.	1	Electrical system gives trouble.	1	Failure of electrical parts premature.	Failure of electrical parts premature.	1
								
7. Exhaust	..	..	Exhaust pipe failure due to poor welding.	Exhaust pipe failure due to poor welding.	1	..	..			4
								
8. Propeller shaft	..	..	U. J. fail, Prop. shaft runs out.	U. J. fail, Prop. shaft runs out.	1	Failure of prop. joint and U. J. gives way.	3	Prop. shaft centre joint bearing gives way.	Stub shaft key worn out.	1
	..	..						C. J. brackets give way.	Steve yoke cracks.	1
								
								
								
9. Suspension front	..	..				Spring defective	2			2

Part, sub-assembly or assembly	Jeeps	Bedford	Dodge	TMB	Ashok Leyland
10. Rear axle . . . . .	..	Crown wheel and pinion fail prematurely. 1 Humming noise in differential. 1	..	Rear spring bracket welded cannot be re-moved easily. 1 Differential weak 1 Hub studs get loose. 1 Bearing noisy for pinion wears out. 1 Frequent breakage of axle. 3 Rear shock absorber bracket breaks. 1 Crown wheel pinion defective. 3 Hub drum breakes 2 Oil leakage from oilseals. 1 Housing and axle give trouble. 1 Hub of rear wheel cracked. 1 Axle out of alignment. 1	Crown bearing loose. 1 Differential casing developing cracks. 1 Check nut on crown pinion comes out. 1
	2			17	3



11. Steering	..	..	..	Steering mechanism defective.	1	Steering design defective clamping by pinch bolt not satisfactory.	1
				Main shaft required replacement.	1		

2

12. Brakes with Brake drums.	..	Brake system defective.	1	Vacuum capacity inadequate.	1	Brakes are delicate.	1	Brake adjuster unit loose.	1
				Brake shoe supporting broken.	1	Brake adjuster gets worn out.	1	Hand brake cable broken.	1
								Brake system not heavy enough.	4
								Breakage of brake pipes on rear axle.	1

13. Wheels :

(i) Tyres and tubes	..	..	..	Tyres fail prematurely.	5	..	..
(ii) Wheels	..	..	..	Bearing fail due to incorrect fitment.	1	..	..

Part, sub-assembly or assembly	Jeeps	Bedford	Dodge	TMB	Ashok Leyland
14. Frame and chassis	Front end structure defective.	1 Centre cross members are not strong enough and crack.	1 ..
			Location of driver's seat and steering assembly bad.	1 Centre bearing bracket cracks.	1
				Chassis cracked prematurely.	1
				2	3
15. Body and upholstery	Fender and grill made of poor quality.	1 ..
16. Instrumentation	..	Dashboard cracks	1 ..	Dashboard of poor quality material.	1 Mileometer no working after 20,000 miles.



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15.6.3. *Automobile Dealers*: The automobile dealers have also furnished information to the Commission regarding complaints received by them and those reported by them to the manufacturers through product information reports, pre-delivery inspection reports and warranty claim forms. An analysis of this information is given in the Table No. 33.



TABLE 33
Information regarding complaints received from automobile dealers

Part, assembly or sub-assembly	Jeep	Bedford	Dodge	TMB	Ashok Leyland
1. Engine	Oil leakage through gasket. 1 Fan belt fouling against radiator shroud. 1 Con rod bearing seizing. 2 Crank shaft journals damaged. 1 Ring gear teeth worn out. 1	Crank shaft broken. 1 Engine powered. 3	Fan belt defective 1 Cylinder block cracked. 3 Mounting defective. 1 Noise in engine. 2 Con rod bolt became loose. 1 Piston & Rings worn out. 1 Conrod bearing damaged. 1 Poor performance of engine. 1 Guideinlet valve broken. 1 Valves corroded 1 High fuel consumption. 1 Oil leakage . 3 Tensioner timing chain broken. 1 Sprocket teeth worn. 1 Crank shaft broken. 1	Breakage of crank shaft. 1 Cylinder block 1 Mounting defective. 1 Noise in engine. 2 Con rod bolt became loose. 1 Piston & Rings worn out. 1 Conrod bearing damaged. 1 Poor performance of engine. 1 Guideinlet valve broken. 1 Valves corroded 1 High fuel consumption. 1 Oil leakage . 3 Tensioner timing chain broken. 1 Sprocket teeth worn. 1 Crank shaft broken. 1	Piston & ring failure. 1 Engine performance bad. 1
	6	4	18	2	

2. Clutch	Defect in clutch components.	1	Hub disc gets soaked in oil.	1	Clutch shudder	2	Clutch shuddering	2
					Facing worn out	4	Wear in clutch disc excessive.	1
					Clutch operating lever broken.	3		
					Clutch disc bent	1		
						10		3
3. Transmission	Transmission noise	4	Defective castings	1	Noise in transmission.	2	Noise in gear box.	2
	Oil leakage	1	Gear box defective	3	Main shaft lock broken.	1	Gear slippage	2
	Main shaft and gear worn out.	1	Premature wear of gears.	1	Forks worn out	1	Defective alignment.	1
	Defects in gear box.	1			Gear teeth wear out or broken.	2		
					Locating washers broken	1		
					Needle rollers broken.	1		
					Oil seal leaking	1		
					Gear slippage	2		
		7		5		11		5
4. Cooling :								
(i) Radiator & Hoses	..	..	..	..	Hose cracked	2	..	..
(ii) Water pump . . . . .	..	..	..	..	Noise from water pump & leaking	2	..	..
					Seal worn out	1	..	..
						3		3

Part, assembly or sub-assembly	Jeep	Bedford	Dodge	TMB	Ashok Leyland
5. Fuel :					
(i) Tank & Pipes	Petrol pipe 1 blocked.	..	..	..	..
(ii) Fuel pump	..	Defective . . 1	Flex. pipe leaking.	..	..
(iii) Fuel injection Assembly.	..	Nozzle pipe defective.	1 Delivery valves elements wear out.	..	..
			Baymo end of pipe broken. Atomiser pipe failure.	..	..
			
				3	
6. Electrical :					
(i) Starter	Needs frequent overhaul.	..	Failure of starter	..	Defective . . 1 Pinion sticks . 1 Switch fails . 1 Dynamo defect . 1 Dinner switch fails. 1 Stop lamp switch not working 1 Ignition head lamp switch failure 1
(ii) Dynamo	..	..	Failure of dynamo	..	
(iii) Wiring harness & lights.	..	..	Stop light switch not working. Ignition & Head lamp Switch not working.	..	

Part, assembly or sub-assembly	Jeep	Bedford	Dodge	TMB	Ashok Leyland
9. Suspension front	..	..	..	Defects in spring leaves.	1 Shock absorber weak, oil leakage and stem broken.
10. Rear Axle	Noise in differential.	4 Low grade casting	1 Rear axle bends	2 Crown wheel pinion on noisy	3 Crown and tail pinion defective.
		Failure of crown wheel and pinion	3 Spring breaks	1 Crown wheel breaks.	1 Oil leakage
			Grinding within differential.	1 Crown wheel not adjusted	1 Spring cracked
			Gear assy. breaks	1 Rear axle housing breaks..	
	..		Bearing noisy	1 Teeth scored	
	..		Axle shaft broken	1	
				4	6
				8	3
11. Steering	Connections shaky	1	Column bracket broken.	1	..
	Play in tie rods	1	Play in steering gear.	1	
			Tie rod socket broken.	1	
			Oil leaking	1	..
			Steering wheel bent and cracked.	1	
				5	
				2	

Part, assembly or sub-assembly	Jeep	Bedford	Dodge	TMB	Ashok Leyland
15. Body and Upholstry .	Body rattling 2 Front seat fixture cracked. 1 Paint peeling . 2 Tail gate hinges 1 out of alignment. Door rubber beading 1 comes out.	Teating of front mudguard & bonnet. 1 Front fender bonnet not aligned. 2 Cowl not seated properly. 1 — 4	Wind screen regulator chain breaks. 1 Front fender bonnet not aligned. 2 Cowl not seated properly. 1 — 4	..	..
16. Instrumentation .	Shrinkage canvas hood. 1 — 8 Instruments defective 2	..	Speedometer defective. 4 — 4 Fuel gauge defective 1 Ammeter out of order 2	..	Speedometer defective. 2 Vacuum gauge not working 1 Ammeter not working. 3 — 6
			Vacuum defective gauge 2 Dash board cracked. 1 — 10		

15.6.4. Manufacturers :

15.6.4.1. Hindustan Motors and Standard Motor Products who are manufacturers of commercial vehicles as well as passenger cars have not separately dealt with the complaints received by them with regard to commercial vehicles. As regards the other manufacturers of commercial vehicles their comments are as follows :—

15.6.4.2. Premier Automobiles has received complaints about excessive wear in universal joints bearing rollers of propeller shafts, cracks at the spokes near hub of steering wheel, clutch shudder, steering wobble, gear slippage, breakage of rear axle shaft etc. These have been rectified by taking up the matter with the collaborators, by providing extra heavy duty propeller shafts, by modification of design of steering wheel, modification in design of clutch, balancing of drums etc.

15.6.4.3. Ashok Leyland has reported that it has received complaints about the failure of the mounting pad, defect in dipper switch, gears, pinions, main-shaft, propeller shafts etc. The defects have been set right by improving the quality of the mounting pad by the supplier, realigning the engine foundation ; and by changing vendors, their source of supply, when the bought-out parts could not be improved by the existing vendor. In other cases it has carried out improvements in the quality of castings with the aid of its engineering staff and by modifying the lay-out of speedometer cables etc.

15.6.4.4. TELCO has informed us that it has received complaints about cracking of front axle-I beam, breaking of rear axle housing, noise in crown wheel and pinion assembly, and breaking of rear axle shaft, defect in steering assembly, breakage of springs, gear box etc. Remedial action has been taken in every case such as by replacing the 312 type of front axle by heavy duty 321 front axle, by intensive field campaign advising operators not to overload vehicles etc. The tooth design of crown wheel and pinion was modified to get over the complaints of noise in the crown wheel and pinion assembly. The steering assembly has been modified to get over the complaints against this item. The breakages of springs were attributed to overloading and fast driving on bad roads and to get over this defect the number of

leaves have since been modified which has controlled the complaint to a great extent. Suitable remedial action has also been taken in other cases.

15.6.4.5. Mahindra & Mahindra has informed us that it has received complaints about seizure and rotation of bearing shell in big end, engine seizure and breakage of moving parts, cracks developing on the cylinder block, burning of valves, defects in electrical system, gear slippage, noisy gears and excessive shrinkage of canvas. Remedial action has been taken in each case such as by finishing big end bore to obtain pinch fit, usage of connecting rod nuts of correct specifications, modifying sections of cylinder block to prevent cracking, changes in machining and heat treatment process and where necessary taking up the matter with vendors to improve the quality and supplies. In several cases the complaint has been eradicated altogether and wherever the success is not complete the matter is being pursued.

15.6.4.6. Bajaj Tempo has received complaints about the speedometer cable, electric horns, dipper switches, rear coil springs, etc. To get over these the design of speedometer cable has been changed and incidence of failure has been reduced. The suppliers of bought-out items have been changed to eliminate complaints in vendor items. In the case of rear spring the matter has been taken up with the vendor to improve the quality of the springs. In certain cases modifications have been made to special purpose machines and heat treatment procedure to rectify defects in certain parts.

15.6.4.7. Simpson and Co. has stated that no particular service complaint has been made on its engines and whatever complaints are received, they are immediately investigated for the cause of failure of the affected parts and proper advice given to the operators.

15.7. Commenting on the quality of vehicles manufactured in the country the D. G. T. D. has stated that practically all the indigenous manufacturers are in collaboration with foreign firms. They have generally been keeping to standards and specifications of their collaborators in the production of vehicles. So far as commercial vehicles and jeeps are concerned, they have had very few complaints about the quality although one reputed private fleet operator has reported that

TABLE 35

*Analysis of complaints received in respect of
commercial vehicles*

Sl. No.	Parts or assembly or sub- assembly	No. of complaints received from		
		Fleet owners	Dealers	Total
1	2	3	4	5
(a) Jeeps				
1. Electrical parts	8	8
2. Body with upholstery	8	8
3. Transmission	7	7
4. Engine	6	6
5. Rear Axle	4	4
6. Steering	2	2
7. Wheels	2	2
8. Instrumentation	2	2
9. Clutch	1	1
10. Tank & pipes	1	1
11. Brakes with brake drums	1	1
TOTAL .		..	42	42

1	2	3	4	5
(b) <i>Bedford</i>				
1. Transmission		2	5	7
2. Rear axle		2	4	6
3. Engine		1	4	5
4. Clutch	1	1
5. Carburettor		1	..	1
6. Fuel Pump	1	1
7. Electrical parts	1	1
8. Prop. shaft		1	..	1
9. Brakes with brake drums		1	..	1
10. Frame & chassis	1	1
11. Body with upholstery	1	1
12. Fuel injection equipment	1	1
13. Instrumentation		1	..	1
<hr/>				
TOTAL .		9	19	28

1	2	3	4	5
(c) <i>Dodge</i>				
1. Engine	4	18	22	
2. Electrical parts	5	16	21	
3. Transmission	6	11	17	
4. Clutch	3	10	13	
5. Prop. shaft	3	10	13	
6. Instrumentation . . . . .	..	10	10	
7. Brakes with Brake drums	2	7	9	
8. Rear Axle . . . . .	..	8	8	
9. Water pump	4	3	7	
10. Wheels	1	6	7	
11. Steering . . . . .	...	5	5	
12. Body with upholstery . . . . .	..	4	4	
13. Frame & chassis	2	1	3	
14. Fuel injection equipment . . . . .	..	3	3	
15. Radiator hose . . . . .	..	2	2	
16. Fuel pump	1	1	2	
17. Exhaust	1	1	2	
18. Tyres & Tubes . . . . .	..	1	1	
<hr/>				
TOTAL .		32	117	149

1	2	3	4	5
(d) <i>T.M.B.</i>				
1. Rear Axle		17	6	23
2. Engine		5	1	6
3. Tyres and tubes		5	..	5
4. Frame and chassis		3	1	4
5. Suspension Front		2	1	3
6. Electrical parts		2	..	2
7. Propeller shaft		2	..	2
8. Steering		2	..	2
9. Brakes with brake drums		2	..	2
10. Transmission		1	..	1
11. Radiator hose		1	..	1
12. Body with uphostry		1	..	1
13. Instrumentation		1	..	1
TOTAL .		44	9	53

1	2	3	4	5
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(e) *Ashok Leyland*

1. Electrical Parts	4	10	14
2. Transmission	6	5	11
3. Brakes with brake drums.	7	4	11
4. Engine	6	2	8
5. Instrumentation	1	6	7
6. Rear Axle	3	3	6
7. Propeller shaft	2	3	5
8. Clutch	1	3	4
9. Fuel pump	3	..	3
10. Wheels . . . . .	..	2	2
11. Suspension Front . . . . .	..	1	1
12. Steering	1	..	1

TOTAL . 34 39 73

15.8.3. It is not a source of any gratification to observe that in the case of Ambassador car only the fuel tank and pipes, battery and propeller shaft have escaped complaint. These constitute only a few of the assemblies. Most of the components which go into these assemblies are purchased from indigenous ancillary manufacturers. In the case of the Fiat car only the propeller shaft, fuel tank and pipes, carburettor, fuel pump, frame and chassis have been found to have attracted no complaint. But for the chassis which is

the skeleton on which the vehicle is built, the rest of the items are also the contribution of the ancillary industry. The Standard has fared the worst. Only three items viz., clutch, steering, and chassis seem to be without blame.

15.9.1. The general impression gained during the public inquiry as well as from the data received by us, is that the producers of automobiles today are less quality conscious than they ought to be. It is not that they do not have the necessary equipment or wherewithal to ensure better standard and quality. The details furnished to us of the quality control equipment installed by these manufacturers reference to which is made in paragraph 16 show that first rate quality can be ensured with the equipment available. This leads, therefore, to the inevitable conclusion, that their attention is wanting in the maintenance of good quality and the production of such vehicles which may give trouble-free service for such periods as may justifiably be considered to be the reasonable duration for the performance of each assembly or sub-assembly. There appears to be an inclination to make compromises on the issue of quality both for components bought-out and manufactured in the units themselves.

15.9.2. This brings us to the organisation of the inspecting staff of the various units. According to the information furnished by the Automobile manufacturers and to the extent we have been able to verify during visits, inspection departments are independent of the production departments in Simpsons, Standard Motors and Bajaj Tempo only. If the quality control inspection staff are subordinated to the production executives, there is inherent risk of compromise on quality not only respect of incoming raw materials but also in the production processes and in the final checking. In principle therefore it would be preferable to establish co-ordination between the production and inspection staff at an independent and equal level, both being coordinated to the extent necessary at the point of top management, who it is needless to add must be themselves highly quality conscious if significant improvements are to be expected.

15.10. In a sellers' market there is a tendency for deterioration of quality and automobiles are a case in point. This industry is one of the largest in the country and the annual

sale value of its product constitutes 7.68 per cent of the total industrial production of the country. The individual manufacturers as well as the industry as a whole ought to develop a feeling of responsibility for the maintenance of quality standards compatible with those expected by consumers and generally available without clamour or agitation in other countries. In the course of the public inquiry and also otherwise in the replies received by us some of the manufacturers tried to put part of the blame on the manufacturers of ancillaries. The sample that we have collected and analysed shows however, as would appear from the list in paragraph 15.8 that parts and assemblies manufactured by the automobile units head the list and not those supplied by ancillary manufacturers. Even if it may be accepted for a moment, that the ancillary manufacturer is partly to blame, the situation could be rectified more easily than if the defect arose in the vehicle manufacturers' plants and assemblies. For, the regulation of compliance of the standards and specifications given by the automobile manufacturers to the ancillary manufacturers is in the hands of the vehicle manufacturers and it is in the discretion of the latter to reject components which are not of the correct specification. As matters now stand, they have the benefit of securing licences for purchase of such components from abroad if suitable or adequate supplies are not indigenously available. The argument therefore that defective quality is due to poor ancillary manufacturing processes or supervision is unsound on grounds of fact as well as principle. In the case of one of the automobile manufacturing units it was found that in several departments the workers were paid on piece-rate basis. It is generally accepted that where a high degree of precision and rigid standard of quality have to be applied the piece-rate system is not a satisfactory form of payment to workers. Whatever the benefits that may be gained by this mode of payment they are more than neutralised by having to resort to rigid inspection at every stage, any slackness in the inspection being ruinous to quality.

15.11. We are aware that an expert committee has gone into this question in detail and has made its recommendations already to Government. We have therefore confined ourselves as above to the analysis of the data furnished to us

and to a few observations that emerge from the facts which came to our notice.

16.1. In order to ensure an acceptable quality in the finished product, testing and inspection have to be carried out at all stages starting from raw materials and boughtout parts to the finished products.

16.2. All the automobile manufacturers were requested to furnish information about the organisation of their inspection and testing departments and about facilities available with them for maintaining proper quality control on the vehicles manufactured by them. The information furnished by them is summarised below :

16.2.1. Hindustan Motors :

It has a Manager in charge of quality control assisted by junior supervisors and inspectors. Each person is clearly instructed on his specific job. The section supervisor carries out routine cross check to establish dependability. A central investigation section reporting to the chief inspector and quality control manager directly cross checks all important check points as a routine.

16.2.2. Premier Automobiles :

Its inspection department at Kurla Factory is controlled by a chief inspector who is responsible to the controller of production for both administrative and technical functions. It has separate inspection departments at the Kalyan and Wadala plants. The inspection department is divided into five divisions, each division being in charge of a group of shops. In addition it has a defects investigation cell, special dynamometer testing cell and statistical quality control cell. The central defects investigation cell is directly responsible to the chief inspector. Periodic reports from service departments are analysed in this cell. Product failures in the field are also investigated for manufacturing defects.

16.2.3. Standard Motor Products :

Its inspection department is independent of production. The Quality Standards for the process as well as the final

products have been initially set by its collaborators and only modifications are made by it, with design changes to suit Indian conditions. The inspection department carries out various functions such as inspection of incoming goods, patrol inspection, final inspection and testing. It exercises control over the inspection staff through study of percentage functional defects noticed at subsequent production and assembly stages.

16.2.4. Ashok Leyland :

It has an inspection department which carries out the various functions assigned to it. Detailed instruction sheets are issued to the inspectors regarding the dimensions to be checked by them for each component. Surprise checks on random samples are carried out. Inspection procedure codes are issued for assembly inspectors engaged in testing the vehicle at different stages. The chief inspector with his team of technicians takes up detailed investigation of product complaints received from service departments.

16.2.5. TELCO :

Its inspection staff is controlled and guided by a Superintendent. Investigation is done both by the Metrological Department which picks up the samples at random and checks the quality of the product including dimensions and also by guarantee inspection department which investigates the cause of failure in the field. Machined as well as bought out items are sent as per schedule regularly to Experimental Section for long duration and destructive tests which also contribute considerably to the improvement of quality.

16.2.6. Mahindra and Mahindra :

It has a centralised department where all the quality control engineers report to the quality control Manager. Each shop is divided into various sections depending upon the number of machines and operations. A Senior Inspector is in-charge of each section and he carries out together with his staff the inspection assigned to his section. Thorough reports are made in each and every section and submitted to the statistical quality control section of the quality control department where reports and charts are prepared. The controls

are so enforced that defects are located and rectified at source to maintain good quality with minimum expenditure. The entire quality control system is divided into (a) purchased parts inspection, (b) manufacturing inspection, (c) assembly inspection, (d) Laboratory and (e) Statistical Quality Control.

16.2.7. Bajaj-Tempo :

It has a Chief Inspector who is directly answerable to the General Manager so that he is independent of the production staff. The Chief Inspector Controls the working of the entire inspection staff which is located in different manufacturing sections. He is assisted by Section Inspection Engineers and other staff. The unit also has a receipt inspection department to take care of purchased material and vendor supplies. The method of inspection and control is either by statistical quality control on 100% inspection or random sampling.

16.2.8. Simpson and Co. :

Its inspection section is under a chief inspector who is not under the Production Management but is directly answerable to the Director and General Manager. The Inspectorate is divided into stage inspection and final inspection department. The stage inspector does patrol inspection in the shop during the process of manufacture. Final inspection is made for testing finished engines. Incoming raw materials and vendor supplies are inspected and tested on the basis of sampling plans.

16.3. Raw material and vendor parts inspection :

All the manufacturers have informed us that they carry out inspection of incoming raw materials and analytical and physical tests are made for chemical and other properties. Similarly all manufacturers inspect and test semi-finished and finished parts bought out from indigenous sources for dimensional accuracy and physical properties either on the basis of sampling or 100% inspection depending on the importance of the part. Ashok Leyland has reported that it carries out accelerated bench tests, on test jigs and also field trials for ascertaining performance standards. It also carries out endurance tests. TELCO has informed us that it is investing about Rs. 32 lakhs for setting up, at its works, a track on

which TMB vehicle fitted with own made and ancillary made parts can be tested. Sections of the track are already being used for carrying out endurance tests.

16.4. In-process, Inspection :

16.4.1. Hindustan Motors :

In the manufacturing departments the system adopted by Hindustan Motors is as follows :

Approved forgings, castings, and bar items are checked for acceptance on machining. Dimensional accuracy is maintained by setting up regular checking at all stages of machining. During production run operators use different kinds of gauges. In special machines special gauging attachments are used for dimensional accuracies. Production line inspectors in addition to standard 'go' and 'no go' gauges use sensitive air gauges. Multicolumn air gauges are used by inspectors for final check up of complicated parts. Statistical Quality Control charts are maintained for controlling dimensions of selected parts. 100% check is made on vital dimensions of important parts. Heat treatment quality is maintained by regular process checking. Hardness is checked 100% on all important parts. Gear tooth accuracies and forms are carefully checked. Engine, gear box etc. are checked at all stages of assembly and the completed engines are tested on test beds fitted with dynamometers. Gear boxes are tested for noise, knock and other irregularities, rear axle sub-assemblies are checked by gauging and so are the hypoid gear and pinion. The performance of the rear axle is tested under varying load and speed. The quality of metal, thickness and press tool and die set up are carefully checked, accuracy of sub-assemblies is maintained by use of fixtures, and all body units are checked for weld dependability. Paint quality is controlled by checking all bodies at different stages from cleaning to reflow coating. Check is maintained on oven temperature and paint thickness.

16.4.2. Premier Automobiles :

The inspection during the process of manufacture is on the basis of random sampling. The inspectors check samples from production lots for conformity with specifications by gauges provided for each operation. All parts are visually

inspected for completion of all operations before moving from one stage to another. These are also inspected before releasing them to assembly operations. Critical dimensions of every part are checked.

16.4.3. Standard Motor Products :

On the production lines it has patrol or line inspection on sampling basis. At the final stages either there is a full inspection or inspection based on percentage basis. On major sub-assemblies functional and performance tests are carried out.

16.4.4. Ashok Leyland :

The system of inspection and testing during the process of manufacture consists of 100% dimensional test on all the line items being produced in its machine shop. In the Auto Bar Shop where mass production machines are in use, a system of Statistical Quality Control is being introduced. 100% testing is done in the assembly departments where engine and chassis are produced and every engine is given a running test. All heat treated parts are inspected. It has a temperature controlled gauge room for checking measuring gauges used by the inspection staff.

16.4.5. TELCO :

The method adopted in the process of manufacture is of Statistical Quality Control following the process of attributes as well as Control Charts. During operation Line Inspection as per Statistical Quality Control Charts is followed as well as sample inspection as per acceptance plan. For functionally important components, 100 per cent inspection is carried out. Besides visual and dimensional inspection, hardness testing and destructive tests are done. For all assemblies, line inspection is done as per inspection instructions issued and 100 per cent inspection for important settings. On chassis assembly line SQC is followed for certain points like tightening torque of nuts and bolts and formation of rivet heads. Machines where the procedure of checking is automatic are used for hardness testing, surface finish and connecting rod weighing and grouping. Automatic testing equipment is in use for dimensional checking of some items which are produced in large quantities.

16.4.6. Mahindra and Mahindra :

Under its manufacturing inspection, material is inspected at different stages of operation including the final production inspection. In shops like press shop, and machine shop

it has 'first off inspection', 'patrol inspection' and final inspection. Gauges and instruments used by both production shops and the inspection department are checked periodically in the metrology room. During assembly, inspection is done at various stages of sub-assemblies like gear box, transfer case, front and rear axles and engine.

16.4.7. Bajaj-Tempo :

In its manufacturing sections inspection staff is divided in all sections like machine shop, sub-assembly, body, press, foundry shops etc. In the machines shop the inspector checks a few jobs on various automatics and semi-automatics and gives the approval and then checks the other jobs occasionally during his shift. The entire lot is checked hundred per cent for important components and by sampling for non-functional components.

16.4.8. Simpson & Co. :

It has continuous sampling inspection at all important stages during the manufacture of various components. Apart from the above, it follows the test schedules laid down by its collaborator.

16.5. Final Testing :

16.5.1. Hindustan Motors :

The assembled car is tested for water sealing in a multi-jet water shower. Wheel alignment, suspension, electrical connections, steering and drive train fitments are checked on the assembly line. All vehicles are road tested for engine performance, brakes efficiency, oil sealing smooth gear slip, silent rear axle operation, body rattle etc. One vehicle is picked up at random occasionally and subjected to detailed check on road and in work-shop for possible defects which might have escaped the normal inspection check. Reliability check is also carried out on random cars pulled off the vehicle despatch section to pinpoint errors overlooked in routine check.

16.5.2. Premier Automobiles :

For testing vehicles it has a roller stand for Fiat cars, artificial rain test stand, test track with high speed bend test facility and road test equipment like decelerometer, Tapley

meter (for pedal pressure) and fuel consumption meter. It has hydraulic and Eddy current dynamometers for testing engines, run in stands, fuel injection pumps test benches, fuel flowmeter, tune up tester, combustion efficiency tester, noise detecting stethoscope, Hartridge smoke meter, testing rigs for determination of noise level in transmission, test rigs for testing rear axles, equipment for testing springs, shock absorbers, radiators and wheel assembly.

16.5.3. Standard Motor Products :

It has facilities for testing on test beds to evaluate the performance of vital sub-assemblies and assemblies. It also carries out road test of finally assembled vehicles, and tests for water sealing, brake and steering alignment. It has equipment such as dynamometer test bed for engine performance, fuel consumption testing equipment, exhaust gas analyser, distributor tester, spark plug tester, Crypton auto-visor, deflection and rate test jig for testing springs, electronic wheel balancer and wheel alignment fixture.

16.5.4. Ashok Leyland :

It has test beds to carry out tests on the performance of every engine. It has spring testing machines, special jigs for checking wheel alignment and special equipment for brake testing. After assembly all vehicles are checked according to a specified check list and road-tested before delivery.

16.5.5. TELCO :

Machinery and equipment has been installed for carrying out tests on engine performance, brakes, springs, wheel alignment etc. It has water brake test stand with facilities for test of fuel consumption, balance for oil consumption, exhaust analyser and high precision RPM-counter for exact calculation of horse power and special calibrated fuel injection pump test stand, brake pedal pressure for recording deceleration of the vehicles, hydraulic machine for load testing of springs and exacta-mirror-wheel-alignment-gauge. Vehicles are subjected to pit inspection, functional inspection of brakes, test of engines and electrical equipment before delivery.

16.5.6. Mahindra & Mahindra :

The vehicles are subjected to a thorough inspection for shortages and poor workmanship. These are road tested

later on to detect any flaws in the electrical system and for checking functional requirements like steering and brakes, general engine tuning and engine pick up. For checking engine performance the unit has hydraulic dynamometer, combustion efficiency tester, compression gauge, temperature gauge, electrical and mechanical technometers, ignition timing gun, stroboscope, airsonic stethoscope, equipment for checking fuel consumption, clinometers, altimeters etc. The unit has equipment for brake testing, spring testing and wheel alignment testing.

16.5.7. Bajaj-Tempo :

After the final assembly Bajaj Tempo subjects the vehicles to various tests such as road tests, brakes, engine performance, acceleration, clutch, shock absorbers body rattling and general behaviour of the vehicles.

16.5.8. Simpson & Co. :

It has a battery of Heenan & Froude dynamometers on which it conducts long run tests on all engines in accordance with the procedures laid down by its collaborators.

16.6. Road Tests :

All the manufacturers give a road test to the vehicles. The system differs from unit to unit some giving duration tests and other distance tests, as shown below :

1. Hindustan Motors	35 to 45 minutes
2. Premier Automobiles	9 to 10 Km.
3. Standard Motor Products	30 minutes
4. Ashok-Leyland	112 Km.
5. TELCO	30 minutes
6. Mahindra & Mahindra	30 minutes
7. Bajaj -Tempo	6 to 13 Km.

16.7. Strength of Inspection staff :

Although the quality of the ultimate product cannot be measured by the strength of Inspection Staff alone the latter is nevertheless an indicator of the importance the manufacturer attaches to quality control. The information about the strength of the inspection staff in relation to the total number of production workers employed by the automobile manufacturers is given in the Table No. 36 :

TABLE 36

Strength of the Inspection Staff

Name of manufacturer	Strength of Inspection Staff	Inspection staff as % of total pro- duction workers
	Nos.	%
1. Hindustan Motors	328	8.6
2. Premier Automobiles		
Kurla Plant	530	12.5
Kalyan Plant	29	4.2
Meehanite Plant	23	7.8
3. Standard Motor Products	107	9.6
4. Ashok Leyland	199	9.0
5. TELCO	689	14.0
6. Mahindra & Mahindra	285	5.0
7. Bajaj-Tempo	32	5.0
8. Simpson & Co.	121	15.0

17.1. The Indian Standards Institution has informed us that it has taken up the work of preparing Indian Standard specifications for a number of components and parts used by the automobile industry. The work on some standards has been completed and on others it is in hand while some others are planned.

17.2. The present position with regard to Indian standard specifications for raw materials and components used in the automobile industry is as given in the Table No. 37 :

TABLE 37

Present position with regard to Indian standards specifications

	Standards Published	Standards under prepara- tion	Standards on pro- gramme of formula- tion
(i) Structural and Metals :			
(a) Ferrous	51	8	..
(b) Non-ferrous	32	3	3
(c) Welding	11	2	..
(ii) Mechanicals and components	25	18	42
(iii) Electrical	19	10	15
(iv) Chemicals (Lubricants, fuel) .	15	2	2

The complete list of Indian standard specifications formulated and those under preparation relating to the automobile industry is given in Appendix XII.

17.3. Some of these standards are on specialised items of automobile industry whereas others are for the engineering industry in general which also includes requirements of the automobile industry. The Indian Standards Institution has stated that the standard specifications are voluntary instruments. The process of their formulation involves agreement

between the different interests concerned. As such they are expected to find ready acceptance. However it appears that mainly because of foreign technical collaboration agreements and the difficulty in the procurement of materials of standard quality the progress of implementation of national standards by the industry is comparatively slow. I.S.I. has cited a typical example relating to the automobile industry's requirements of fasteners. A panel consisting of the automobile manufacturers, the fastener manufacturers and other interests appears to have studied the various aspects of the problem and has developed a phased programme for the automobile manufacturers for changeover to fasteners manufactured to metric dimensions, conforming to Indian Standards. It is expected that by the end of 1971 the automobile industry will be procuring nearly 95 to 98 per cent of their fasteners indigenously.

17.4. As mentioned earlier the I.S.I. and a technical cell of the Development Council for Automobiles and Allied Industries have rationalised the requirements of steel bars and billets by the automobile industries to 28 varieties conforming to Indian Standard specifications. Some standardisation has already taken place in respect of certain components, e.g. dash-board instruments and automobile batteries. A 12-Volt electric system has been adopted for all the vehicles. Practically all the vehicles have adopted the use of individual instruments on the dash-board. Fuel pump and carburettors being developed are likely to be common for Willy's Jeeps, Standard and Fiat cars. Further, basic design of a steering gear for three vehicles namely FC-150 Willy's truck, Standard 1-ton truck and Tempo 4-wheeler has also been developed. Some standardisation has been possible in door lock and remote control, window regulators and locking device. Wind-screen wiper blades have been developed as a standard item for different makes of cars. Air brakes required for commercial vehicles have also been standardised. Where functional parts are concerned standardisation is however for obvious reasons difficult.

17.5. We have as many as eight vehicle manufacturers (including Defence Department) having technical collaboration with different countries. Parts and components in dimensions as well as designs are of different standards so

much so that even a small item like bolts and nuts is not always interchangeable. Even specifications for raw materials differ from country to country. In these circumstances, it is easy to understand the difficulties about standardisation; but standardisation and interchangeability of parts and components which are of multiple and universal application are absolutely necessary to reduce costs of production. A reference has been made about the foreign collaboration agreements among the automobiles manufacturers which are a hindrance to standardisation of functional parts. It appears to us that this handicap is not faced only by vehicle manufacturers but also by ancillary manufacturers who have different collaboration agreements with different firms. Ways, therefore, need to be devised for overcoming the diversities in these matters resulting from foreign collaboration particularly when the functional properties are not likely to be affected adversely.

17.6. It may be possible to standardise on lights, instruments, thread sizes, oil seals, grease nipples, springs, fittings and mountings and the characteristics of splines, gears and raw materials. The representative of the National Test House, Alipore informed the Commission at the public inquiry that a question had been raised some time back about the standardisation of ball bearing used by the automobile industry. It appears that owing to a number of factors all the automobile manufacturers wanted to use particular types of bearings which were being used by their collaborators. Some redesigning might have been necessary to use bearings made in India. But we are informed that there was resistance on the part of some automobile manufacturers, who wanted to continue the use of particular types of bearings and these had necessarily to be imported. We consider that with minor modifications a considerable degree of import substitution can be achieved.

17.7. It is obvious that as far as standardisation of parts is concerned it is only the manufacturers of automobiles who can take decisions on this matter, since it is a question of some adjustments or alterations.

17.8. The I.S.I. has informed us that a systematic effort towards variety rationalisation and standardisation within

the manufacturing unit is only possible if the units lay emphasis on this activity. It has also stated that it has organised training programmes on company standardisation and that nominees of some of the Indian automobile manufacturers have participated in the programmes conducted so far. The work on standardisation has to continue with patience and perseverance both at the company level and national level with regard to certain materials and components that go into the automobiles and for materials and components that would be common to other engineering industries. The progress on this is likely to become faster if the manufacturing units are not tied down to specifications dictated by their foreign collaborators where these can safely be modified. It is expected that where adequate initiative is present the collaborators would be agreeable to give their consent to such modifications which can be effected in the interest of standardisation, uniformity and indigenisation without detriment to quality.

18.1. We had asked the manufacturers to furnish information about the organisation, equipment, staff and annual expenditure incurred by the automobile manufacturers on research and development and particulars of any technical improvement achieved by them through the efforts of their own staff.

18.2. The automobile manufacturers have given information about their staff engaged in research and development activities.

18.2.1. Hindustan Motors reported that it has on its staff, and subordinate to the Chief Engineer, a Deputy Chief Engineer, Chief Experimental and Fabrication Engineer and for four other Engineers. It has stated that necessary facilities are provided by its foreign collaborators in its research and developmental activities.

18.2.2. Standard Motor Product's project department is in close co-ordination with material purchase, investigation cell, drawing office, planning and inspection. The company has stated that adequate assistance is available to it from its collaborators on all these aspects.

18.2.3. The research and development department of Premier Automobiles is organised under the Chief Engineer and additional Chief Engineer and has a design and development division in addition to divisions for technical services, proving and material testing laboratories.

18.2.4. Ashok Leyland has a research and development department under an Engineer Manager with three development engineers dealing with engine department chassis and other units and development of heavy duty chassis. The resources of the physical and metallurgical laboratories are available for development work. It also uses facilities available at the various engineering educational institutions at Madras and with other units. Besides, it takes advantage of developments which are being constantly carried out at its collaborator's factory in the U.K.

18.2.5. TELCO's research and development department is engaged in product improvement and development of new products. It also carries out tests on components manufactured by ancillaries as well as in the plant itself in respect of their performance by fitting on test vehicles and by testing dimensionally and metallurgically. One wing of the research and development section is engaged in the development of new products so as to diversify activities. The company has invested a large sum of money in setting up a test track for testing components manufactured indigenously by fitting them on test vehicles. It is obtaining technical information from its collaborators relating to improvements and developments within the field of its programme of manufacture.

18.2.6. The research and development activities of Mahindra & Mahindra are, the unit has stated, a part of the work of its product engineering department. It has arrangements with its collaborator to furnish full technical information and other assistance in respect of any inventions, development or improvements made by them and adopted in their own manufacturing operations in so far as they are applicable to the products manufactured by Mahindra & Mahindra under the agreement. This arrangement is reciprocal.

18.2.7. Bajaj Tempo claims to have done some development work. No mention has been made of the existence of a research and development department.

18.2.8. Simpson & Co. has also made no mention about the work done by its research and development department although it has incurred some expenditure on it.

18.3. The Table No. 38 gives figures of expenditure incurred during the last five years on development and research by different automobile manufacturers showing the importance attached by them to these activities.

TABLE 38

Expenditure incurred on development and research by automobile manufacturers

(Rs. in lakhs)

Unit	Department	1961- 62	1962- 63	1963- 64	1964- 65	1965- 66
1. Hindustan Motors.	Research, Development, Metallurgical and other laboratories.	6.34	7.94	12.33	14.77	19.65
2. Premier Automobiles.	Research & Development.	3.48	3.85	4.13	5.78	5.22
	Metallurgical & other laboratories.	0.85	1.12	1.21	1.48	1.33
	TOTAL	4.33	4.97	5.34	7.26	6.55
3. Standard Motor Products.		..	..	..	..	..
4. Ashok Leyland	Research & Development.	0.20	0.22	0.45	0.75	1.33
	Metallurgical & other laboratories.	..	..	0.56	0.71	..

Unit	Department	1961- 62	1962- 63	1963- 64	1964- 65	1965- 66
5. TELCO	Research & Development	7.92	13.70	15.21	18.40	21.86
	Metallurgical laboratories.	& 9.46	10.83	11.80	15.83	18.79
	TOTAL	17.38	24.53	27.01	34.23	40.65
6. Mahindra & Mahindra.	Laboratories	0.39	0.38	0.47	0.39	0.21 (for six mon- ths)
7. Bajaj Tempo	Research & Development.	..	..	0.51	0.64	0.70
8. Simpson Co.	Research & Development.	Annual expenditure				0.98

18.4. The Tariff Commission had as early as in 1953 emphasised the need for all firms with a manufacturing programme to set up designing and research sections of their own. It had also recommended that the firms should become independent of their foreign associations within as short a period as possible.

18.5. However, the position is that invariably in case of every type and make of automobile in India, the designs, specifications of similar vehicles manufactured abroad have been without exception adhered to. The only departures made and reported to us are as follows :

18.5.1. Hindustan Motors :

It has carried out a number of technical improvements with the help of its own research staff on the Ambassador Car such as re-mounting of accelerator cable, side and flasher lamp, brake lining, development of new radiator grille for

Mark II eliminating stainless steel, providing mechanical fuel pump instead of electrical, improvement in angle of windscreen wiper, vertical mounting of ignition coil, new control box providing voltage and current control, development of sound deadeners, sealers and adhesives. For Bedford truck it has developed concentric air pressure brake system, gear change lever made of one piece forging. Rationalisation of radiator design has been undertaken both for Ambassador car and Bedford truck.

18.5.2. Premier Automobiles :

A number of new product developments are claimed to have been made such as, amongst others, 199" wheel base truck chassis, 190", 165" and 119" forward control truck chassis. Besides, a number of modifications in different parts of its various vehicles have also been carried out.

18.5.3. Standard Motor Products :

The company has developed alternative products and brought about improvements by effecting changes in design of chassis and steering wheel and three speed gear box, windscreen panel, self starter, propeller shaft, silencer and inlet and exhaust manifold of its 1-tonne vehicle.

18.5.4. Ashok Layland :

228" and 210" W.B. chassis have been developed, these being special wheel bases for this country. It has also designed a transfer gear box and has under development air brake system and various other items.

18.5.5. TELCO :

Model 1210 vehicles have been developed on the basis of data obtained by intensive testing. Design modifications have also been made to suit local conditions and indigenous materials. It is engaged in the work of improving the design of many components taking into account operating conditions and bad roads in India.

18.5.6. Mahindra & Mahindra :

Improved designs of components to suit local materials and local conditions of manufacture have been developed. The design of the front axle has been changed in order to effect economies in production.

18.5.7. **Bajaj Tempo :**

It has designed the radiator, clutch and steering assembly and modified the brake system and made changes in the designs of several other parts.

18.6. In response to our inquiries about testing and research facilities available with institutions in the country and the extent to which these have been used, we were informed as follows :

18.6.1. The Central Mechanical Engineering Research Institute, Durgapur has reported availability of testing facilities in respect of fuel oil filters, oil seals, shock absorbers, and automobile fan belt. It also undertakes fatigue test for steering columns, high altitude test for small internal combustion engine and routine tests into a number of other automobile parts.

18.6.2. The Indian Institute of Science, Bangalore has stated that though its activities are mainly academic in character, facilities are available in the Institute for testing of IC engines upto 250 horse power for performance and efficiency and testing of carburettors, testing of fuel filters used in automobiles and other engines, and automotive gear-boxes upto 60 horse power, testing of silencers for their noise level and attenuation. It is also equipped with trailer dynamometer for performance testing on road of vehicles and testing fuel injection equipment in automotive and other stationary engines.

18.6.3. The National Test House, Alipore has certain specialised laboratories for conducting chemical, metallurgical, microscopic and mechanical tests including fatigue, electrical and non-destructive tests on automobile engineering materials and accessories.

18.6.4. National Metallurgical Laboratory, Jamshedpur generally undertakes long-term investigations as well as short-term investigations of specialised nature.

18.7. These institutions were asked to indicate the extent to which these facilities have been utilised and they have furnished the following information :

18.7.1.1. None of the automobile manufacturers appear to have referred any problem to CMERI, although the following ancillary manufacturers have utilised the services available at this institute:

- (i) Elofic Industries (India), Delhi.
- (ii) Winston Engineering Works, Calcutta-1.
- (iii) Filtronic, Calcutta-17.
- (iv) Fritz & Singh (P) Ltd., Calcutta-47.
- (v) Rambal Rubber Industries, Bombay.
- (vi) Jhon Fowler (India) Ltd., Calcutta-29.
- (vii) Krishi Engineers Pvt. Ltd., Hyderabad.
- (viii) Firestone Tyre & Rubber Co. (India) Pvt. Ltd., Calcutta.
- (ix) Escorts Ltd., Faridabad.
- (x) Gaskets & Oil Seals Ltd., Baroda.
- (xi) Universal Radiators, Coimbatore.
- (xii) India Radiators Ltd., Madras.
- (xiii) Standard Radiators, Baroda.

18.7.1.2. The following research work was and is being done at the Central Mechanical Engineering Research Institute.

(a) *Design of an Automatic Hydraulically Actuated Piston for Variable Compression Ratio Engine:*

Investigations on varying the compression ratio from 12:1 to 22:1 automatically, to suit the load conditions without any increase in peak pressures (limited to approximately 1000 psi) are on hand. An automatic hydraulically actuated piston has been designed and fabricated. Initial tests have shown promising results.

An engine with such a piston would give part load fuel economy and the ability to burn a variety of fuels. An increase in the BMEP would be obtained and it is expected that the engine would have a very good cold starting ability even at -31.7°C .

(b) *Centrifugal Lubricating Oil full flow filter :*

A suitable centrifugal full flow lubricating oil filter which can replace the present day paper, cotton or felt element filters, has been designed, fabricated and tested successfully. It is now proposed to extend the range of capacity of the filter unit. Use of these filters in automobiles and diesel locomotives will reduce maintenance costs (as there are no replaceable parts), increase the filtering efficiency and permit longer periods between overhauls.

(c) *Restriction Indicators :*

Design of Restriction Indicators for air filters and oil filters has been taken up. A prototype has already been made and a patent application has been filed. Installation of these comparatively inexpensive indicators with filters will considerably reduce maintenance costs.

(d) *Filters :*

Lubrication Oil, Fuel Oil, Air, Hydraulic and other filters were till recently imported. A number of firms are at present manufacturing these filters in the country with imported filter media. Also the large number of models of I.C. Engines and other machinery where filters are required have necessitated the manufacture of several varieties of filters by the Indian industry. This invariably leads to uneconomical production of indifferent quality. In collaboration with a leading manufacturer of filters the Institute has taken up a scheme for rationalising these requirements to a reasonable number of types, enabling mass production. Also efforts are being made for development of suitable indigenous filtering media.

(e) *Design of Inertia Dynamometer and Chassis Dynamometer :*

The design and layout of these have been taken up. The dynamometers will be extensively used for several research/testing problems on vehicles and its components.

(f) *Design & Development of Electrical and Hydraulic Dynamometers :*

The Institute has developed know-how for fabrication of electrical dynamometers for performance evaluation of I.C.

Engines. The design and development of hydraulic dynamometers to test I.C. Engines of high horse power, has been taken up. At present a 600 H. P. dynamometer is on hand.

(g) Investigations on the behaviour of Friction Fabric Liners used for brakes etc. :

Research work of fundamental nature is being done on the behaviour of friction Fabric Liners. A test rig has been designed and fabricated, as per ISI standards for the determination of the exact behaviour of brake linings under different operating conditions, with special reference to temperature and humidity. An attempt is also being made to analyse the variation of co-efficient of friction with sliding velocity and normal load etc., in the case of non-metallic friction liners. Two separate techniques are being tried simultaneously. These, it is hoped, will be very useful in making a more accurate and intelligent design.

(h) Evaporative Cooling :

Considering the several merits of evaporative cooling systems studies on this subject have been undertaken at this Institute. These have shown that the cooling system could be extremely compact with a comparatively significant increase in the mechanical efficiency of the engine. An evaporative cooler designed and tested with a 5 H. P. engine showed that the amount of possible savings in cooper and brass was considerable. The thermal efficiency of the engine in general also improved and a gain of 3 per cent at full load and 10 to 15 per cent at part loads were recorded.

18.7.2. Ancillary manufacturers which have availed of the testing facilities at the Indian Institute of Science, Bangalore are as under :

- (i) Motor Industries Co., Bangalore.
- (ii) International Instrument Ltd., Bangalore.
- (iii) Kirloskar Oil Engine Ltd., Poona.
- (iv) Cooper Engineering Ltd., Satara Road.
- (v) Kulko Engineering Works, Ichalkaranji
- (vi) Escorts Ltd., Delhi.

18.7.3. The following automobile and ancillary manufacturers have availed of the facilities available at the National Test House, Calcutta :

- (i) Motor Industries Co., Bangalore.
- (ii) John Fowler, Calcutta.
- (iii) Krishi Engine, Hyderabad.
- (iv) Mahindra Sinter Products, Bombay.
- (v) Hindustan Motors, Calcutta.
- (vi) Premier Automobiles, Bombay.
- (vii) Indian National Diesel Engine Co., Calcutta.
- (viii) Lynx Machinery, Calcutta.
- (ix) Kulko Engineering Co., Kolhapur.

18.7.4. National Metallurgical Laboratory, Jamshedpur, has informed us that Premier Automobiles Ltd., Bombay had approached it for testing as well as for development work on their automobile parts.

18.7.5. Neither of the above three research Institutions has furnished any information about research and development work done for the automobile industry.

18.7.6. Taking into consideration the volume of production of automobiles in India and also the extent of ancillary manufacturing activity, it appears that these facilities were not utilised to the extent it was possible to do so. We, therefore, recommend that a greater degree of collaboration between these institutes and the automobile as well as the automobile ancillary industry should be established to utilise the facilities available.

18.8. From the replies received from the units it appears that almost all of them have wings designated as research and development departments. A cursory examination of their activities as reported reveals that most of it was developmental and confined mainly to making minor deviations from the collaborator's designs or specifications and presumably in every case with the knowledge and approval of the collaborators.

18.9. All the automobile manufacturers have informed us that their research and development departments are staffed by qualified technicians and all have laboratories for carrying out various tests.

18.10. Under the terms of their collaboration agreements the manufacturers are entitled to get from their collaborators technical data and assistance including supply of designs, drawings and specifications and facilities for testing components and parts manufactured by them.

18.11. Research Association :

18.11.1. In its Report on the industry (1956) the Commission had made a recommendation that the manufacturers of automobiles should take steps to establish an association one of whose objects would be to promote research and development, maintain testing laboratories, proving grounds etc.

18.11.2. In so far as the above mentioned functions of the association are concerned, we are informed by D.G.T.D. that a proposal to set up an Automobile Research, Development and Testing Institute was mooted a long time ago and that the same is now taking shape under the auspices of the Indian automobile industry itself. As early as November, 1959 a meeting under the Chairmanship of the Director General of the Council of Scientific and Industrial Research was held in Bombay which was attended by representatives of the automobile industry, ancillary industries, transport undertakings, Ministries of Commerce and Industry, Food and Agriculture, Transport, Scientific and Cultural Affairs, where it was agreed in principle to establish a Central Research Institute for the automobile industry and that such an Association be formed and governed by the industry itself. Later, Dr. A. Fogg, Director, Motor Industries' Research Association, U.K. was invited to study the facilities available in the country and to recommend measures the automobiles industry should adopt for developing an Automotive Research Institute in this country. In July, 1960, Dr. Fogg submitted his recommendations which were considered by a sub-committee earlier set up to go into the question of establishing a co-operative research institution as also by the Development Council for automobiles. The Council of Scientific and Industrial Research conveyed their agreement in principle to give financial

assistance to the proposed co-operative research association and also promised active participation in the association. On this basis the association was formed and registered under the Societies Registration Act, 1960 *vide* No. Bom/133/66 GBBSD in the State of Maharashtra under the name and style of the Automotive Research Association of India on 10th December, 1966. We understand that the future programme of work as also the estimates of annual expenditure etc. are being worked out. It is hoped that it will soon start functioning actively. In view of the number of complaints also regarding quality of ancillaries, it appears desirable that automobile manufacturers co-operate with ancillary manufacturers in establishing suitable common testing facilities and that full use of the existing facilities available in various institutions is also made.

18.11.3. During the public inquiry it was stated that two of the automobile units had not joined the research organisation as yet. We consider that it would be in the interest of the development of the industry on sound and healthy lines, not only of manufacturers of automobiles but also of major ancillaries if they associate themselves with this research organisation and derive benefit from it.

18.12. Training Schemes :

18.12.1. The Tariff Commission had in its Report of 1953 recommended introduction of training schemes for apprentices by all the automobile firms whose manufacturing programmes were approved. Again, in its Report of 1956 the Commission had suggested setting up of properly equipped training shops. The *Ad Hoc* Committee had noticed with regret that the manufacturers who had been longest in the field had thought it unnecessary to accept this advice. It commended TELCO's training programme and observed that with proper attention to training, the Indian industry could offset some of its disadvantages by a reduction in wage cost.

18.12.2. According to the information forwarded to us, most of the automobile manufacturers have set up training schemes or apprentice-shops within their units with a view to imparting specialised training relating to their vehicles. These schools are reported to be properly equipped. Certain manufacturers conduct the training for specified periods, giving in-plant, theoretical and practical training.

18.12.3. As stated earlier, the collaboration agreements with the foreign manufacturers contain provisions for giving technical training to Indian personnel deputed by the manufacturers to foreign countries. Hindustan Motors sends its engineers for training in the plants of its collaborators from time to time. Premier Automobiles also has arrangements with its collaborators for training of personnel and supply of foreign technicians. Ashok Leyland has informed us that it has a nucleus of 14 Indian personnel trained at the factories of its collaborators in U.K. and that from time to time personnel are sent on short term as well as long term training in various fields. It also recruits Indian engineers who are already abroad with a view to imparting further training in its collaborators' works for a specified period and absorb them in various supervisory grades on their return to India. TELCO also has stated that more than 240 of its personnel have been trained by its collaborators. Besides, in order to train the Indian technicians in India its German collaborators have been putting at its disposal, a number of their technical personnel who have been in the employment of TELCO on the basis of servicing contracts. Similar arrangements have also been reported by Mahindra & Mahindra which has stated that at its request, its collaborators will arrange for Indian personnel (at a time not exceeding three) to visit their factories in U.S.A. or the factories of any of their licensees in other countries for reasonable period to study their engineering, manufacture or selling methods and procedures. Wherever necessary, they will also lend to this unit the services of qualified engineers, technicians and other specialists. Bajaj-Tempo has reported that under its collaboration agreement for 3-wheelers it can obtain technical personnel needed by it in the manufacture of these vehicles. It has also arrangements with its collaborator of 4-wheeler vehicles for the training of workmen in Germany and lending of foreign technicians. Simpson & Co. can also send suitable personnel to visit the works of its foreign collaborators for study and also get the services of trained technical personnel from its collaborator for the purpose of advice.

18.12.4. The expenditure incurred by the various units on apprentice training scheme is given in the Table No. 39.

TABLE 39

Expenditure on apprentice training scheme incurred by automobile units

(Rs. in lakhs)

Name of Unit	1961-62	1962-63	1963-64	1964-65	1965-66
1. Hindustan Motors .	0.21	0.48	4.11	4.27	3.82
2. Premier Automobiles .	..	0.10	0.09	0.14	0.19
3. Standard Motor Products . . .	0.05	0.06	0.03	0.06	0.05
4. Ashok Leylands .	2.39	3.00	3.68	3.92	N.A.
5. TELCO . . .	7.78	8.68	9.71	13.03	16.85
6. Mahindra & Mahindra	1.27	1.35	2.01	1.78	1.25 (for six months)
7. Bajaj-Tempo . . .	..	..	..	0.05	0.24

18.12.5. The Ministry of Education has informed us that there is one institute in Madras State which has a degree course in automobile engineering with an intake capacity of 30, there are six institutions which have post diploma courses with the total intake capacity of 107 and there are 14 polytechnics which offer diploma courses. The total intake of these is 340. They are distributed in the various States of the Union as shown in the Table No. 40.

TABLE 40

Number and intake of Institutions offering automobile engineering courses

State	Graduate course		Post-diploma courses		Diploma courses	
	No.	Intake	No.	Intake	No.	Intake
Madras . . .	1	30	2	30	..	..
Andhra Pradesh	2	60
Kerala	1	30
Mysore	3	80
West Bengal	2	30
Orissa	1	15
Tripura	1	15
U. P.	1	30	1	30
Punjab	1	30
Haryana	1	30
Maharashtra	2	35	..	..
Gujarat	1	20
Madhya Pradesh	1	12	..	..
TOTAL . . .	1	30	6	107	14	340

CHAPTER VI

MARKETING SYSTEM

19.1. The marketing set-up for automobiles in India is in line with the general global pattern. It consists of a net work of dealers and sub-dealers appointed by the manufacturers.

19. Selling system of the industry who serve primarily as a link between the manufacturers and the consumers. It also comprises regional offices (branches) of the producers in principal cities and a team of field service personnel, some of them equipped with on-the-spot service facilities. In the case of sales to Government Departments through the D.G.T.D. and to Defence, orders are placed on the manufacturers direct and supply is also effected directly. In addition, State Trading Corporation of India (STC) is also connected with the marketing of foreign cars brought into India. This activity is however, very much limited.

19.2. At present there are in all 338 dealers appointed by the eight manufacturers as detailed below:—

Hindustan	97
Standard	14
Premier	50
Ashok	11
Mahindra	30
TELCO	60
Simpson	34
Bajaj	42
TOTAL	338

In addition there are a large number of branches and sub-dealers working under main dealers. According to the Federation of Automobile Dealers' Association, the number of

dealers including dealers' branches and sub-dealers' organisations is about 800 with an estimated capital investment of about Rs. 50 crores and the employed capital of Rs. 100 crores. The dealer set-up provides employment according to this association to about one lakh persons.

19.3. Dealers enjoy exclusive territorial jurisdictions for sales and delivery but the jurisdictions are not necessarily State-wise or product-wise. Each dealer is allotted a specific territory and he accepts orders and sells the products only within that territory. Orders were booked and executed by the dealers from May 1959 in the case of cars and from May 1963 till recently in the case of commercial vehicles in accordance with the provisions of Motor Cars (Distribution and Sales) Control Order, 1959 and the Commercial Vehicles (Distribution and Sales) Control Order, 1963 respectively. These are discussed further in paragraph 21. Most of the dealers handle trucks as well as cars but a few of them sell only a single make of vehicle. Some of them, it is reported, have recently taken up supplementary activities which do not strictly relate to automobiles as they find dealership business not adequately paying. Dealers have facilities such as show-rooms, stocks of spares and parts, well-equipped service stations to render servicing and carry out repairs and maintenance of vehicles marketed by them. These facilities are rendered directly as well as through branches and sub-dealers. The dealers, branches and sub-dealers are required to keep suitably trained staff. They are provided with proper catalogues, service manuals and other technical literature issued from time to time by the manufacturers. All the dealers are obliged to render after sales-service including free services during the warranty period and implementation of the warranty policies. For dealership a written agreement is generally executed. The Federation of Automobile Dealers Association requested us to recommend drastic revision of the written agreements between the dealers and manufacturers. These agreements are privately entered into by the two parties and hence the terms etc. are better settled between themselves. They do not fall strictly within our purview. We, have therefore, advised the manufacturers to look into the grievances of the dealers sympathetically to win their goodwill as they play an important role in the automobile industry.

19.4. The Commission in its last Report (1956) had broadly classified the duties and responsibilities of dealers as follows:—

- (i) to promote the sales of the vehicles;
- (ii) to arrange for after-sales service and technical advice;
- (iii) to arrange for the stocking of spare parts; and
- (iv) to arrange for periodical servicing, repairs and maintenance.

We have not observed any departure or expansion in the dealers' activities from those enumerated above.

19.5. Closely related to the above set-up are the spare part dealers who cater to the replacement needs of the automobile owners of parts. The Federation of All India Automobile Spare Parts Dealers' Association has estimated that the total number of spare part dealers in India is at present around 9000. In addition to automobile spare parts, many also deal in petrol, oils, tyres and tubes, batteries, tractors, 2-wheeler automobiles etc. Some have also service stations and repair shops etc. attached to them. A few of the dealers are also importers of parts and/or work as distributors, stockists, jobbers, wholesalers and retailers. In short, the link up between car owners and fleet owners with the automobile spare part dealers is in no way less significant than that existing between the former and the automobile dealers. We are informed that the capital invested in the spare parts trade is approximately Rs. 50 crores and that the annual turn-over is about double this amount.

19.6. All the manufacturers except Standard Motors and Simpson and Co. have set up regional/zonal offices in the principal cities of India headed by a zonal Manager or Sales Manager as the case may be with a few service personnel such as service representatives and service machines attached to them. Functions of the zonal offices are generally fostering of sales through personal contacts, controlling the dealers and their activities, advising new developments, improvements, modifications etc. in vehicles and study of market demand. We have been informed that the Zonal officers of three manufacturers, namely, Premier, Mahindra and TELCO

are equipped with mobile vans for giving on-the-spot service facilities in remote places. TELCO's service vans carry even sectionalised aggregates for training and demonstration purposes as also for on-the-spot repairs. State transport organization and big fleet owners have their own service and repair workshops. Manufacturers of automobiles have apprised us about the controls exercised by them over the activities of the dealers. Generally none of them has received any complaints with regard to their marketing system. Nor have any complaints been made to us in this matter.

19.7. The table below gives the number of retail outlets of the principal five Oil Companies in the country State-wise.

TABLE 41
Retail Outlets of Oil Companies in India

Sl. No.	States	Burmah Shell	Esso Standard Eastern Inc.	Caltex India Ltd.	Indian Oil Corporation Ltd.	Indo-Burma Petroleum Co.
1	2	3	4	5	6	7
1.	Andhra Pradesh .	295	138	124	77	6
2.	Assam . . .	..	31	17	50	5
3.	Bihar . . .	190	105	89	75	23
4.	West Bengal . .	265	145	125	101	52
5.	Gujarat . . .	223	127	89	91	19
6.	Hariyana . . .	..	30	..	37	..
7.	Himachal Pradesh .	6	9	..	3	..
8.	Jammu & Kashmir .	27	11	13	7	..
9.	Kerala . . .	185	106	59	77	..
10.	Madhya Pradesh .	246	106	104	100	18
11.	Madras . . .	388	195	140	133	..

1	2	3	4	5	6	7
12. Maharashtra . . .		452	225	163	105	34
13. Mysore		267	129	97	71	5
14. Orissa		74	35	29	41	4
15. Punjab		227	80	103	60	2
16. Rajasthan		163	84	95	93	6
17. Uttar Pradesh		336	164	119	132	35
18. Delhi Admn.		61	36	..	33	11
19. Other Union Territories		24	30	37	9	..
TOTAL		3429	1786	1403	1295	220
Of which equipped—						
(i) With servicing facilities only		193	230	164	58	..
(ii) With servicing and other facilities		330	268	171	N.A.	51

19.8. We have received complaints regarding shortage of spare parts and inadequate service facilities. We are informed that vehicles are kept unduly long in the garages or service stations, causing hardship and loss to their owners. It appears therefore that there has been no increase in the servicing and repair workshops in the country corresponding to the increase in vehicles. This problem is particularly felt in cities where there is concentration of passenger cars. We have received complaints regarding non-availability of spare parts, particularly in the interior. Even in the last Report the Commission had made a passing reference to this point (paragraph 19.4). As a result of the increase in the vehicle population

there has been an increasing number of accidents with the result that the pressure on the existing garages and servicing stations has increased. The number of oil outlets equipped with servicing facilities is also negligibly low as may be seen from table 41. All these factors have adversely affected the quality of repairs and servicing. Although it is maintained that the question of setting up of more servicing stations and diversifying of their locations would depend more upon business considerations than upon the need, it appears that there is considerable room for improvement of standards of servicing and repairs of automobiles.

19.9. Orders from the Defence and under the D.G.S. & D. rate contracts are placed on manufacturers direct and not through the dealers. TELCO has informed us that some of the State Transport Organisations and Government projects too place direct orders on it. These orders are executed by the company, the deliveries being effected direct from its works at Jamshedpur. In other cases deliveries of the chassis are made at the destinations to the parties concerned through the company's transport contractors and payments realised direct from the parties. The requirements of these parties of spare parts are also met direct by this manufacturer. Mahindra & Mahindra, which has also entered into a rate contract with D.G.S. & D., accepts the orders directly and vehicles are delivered ex-factory Bombay or despatched by rail to their respective destinations in accordance with the despatch instructions. A similar procedure is followed in respect of orders placed by the Defence department.

19.10. As regards cars, we are informed that of the three models manufactured in the country, Ambassador has been the only one purchased under rate contract by D.G.S. & D. and by the army. The D. G. S. & D. has furnished us information relating to the purchases only in terms of value and we are informed that statistical data of purchases, quantitatively are not maintained by them. Due to substantial increases in the prices, the statistics of value of purchases do not give any idea of the demand from the Government. For proper planning it is necessary that data should be maintained by quantity as well. We therefore, recommend that D.G.S. & D. should keep records of purchases of automobiles by Government both by number and value.

19.11. The S. T. C. has been entrusted by the Government of India since 1962 with the purchase and sale of foreign vehicles imported for use in the country by diplomatic missions, technicians and experts assigned to India under various aid programmes and non-privileged persons—foreigners and Indians—with a view to preventing the sale of imported vehicles at very high prices. These vehicles are purchased by S. T. C. at the c.i.f. value declared in the bill of entry at the time of import and accepted by Indian Customs authorities. Vehicles from non-privileged persons are purchased at a depreciated value, the depreciation being calculated at the rate of 20 per cent per annum on a diminishing basis on the landed cost (c.i.f. value plus customs duty). The sales and purchases of imported vehicles by S. T. C. are regulated in accordance with the directives issued from time to time by the Government of India.

20.1. All the manufacturers of automobiles supply warranty certificates to the buyer at the time of delivery of the vehicle and these contain, in addition to the terms of warranty,

20. Warranties details relating to free service and other connected matters. By this, manufacturers warrant the respective vehicles sold by their companies to be free from defects in material and workmanship under normal use and service, their obligation being limited to making good any part or parts of the vehicles which develop defects and where the manufacturer or his representative on examination is satisfied that the defects are due to defective material or bad workmanship. The following table (No. 42) shows parts covered by the warranties of different manufacturers, their liability to pay labour charges during the warranty period and responsibility for paying freight on despatch of defective parts to manufacturers' works.

TABLE 42

Details of warranties given by automobile manufacturers in respect of parts, labour charges and freight during the warranty period

Name of automobile manufacturer	Parts covered by the warranty	Labour charges for removing parts and refitting	Freight for sending parts found defective, to manufacturers works
1	2	3	4
1.1. Hindustan Motors Ltd.	(i) <i>Passenger cars</i> All equipment or accessories except tyres	The Company will not be responsible for any expenses which the purchaser may incur in removing or having removed or in replacing or having replaced any part or parts.	Defective parts have to be returned to the authorised dealer carriage paid.
(ii) <i>Commercial vehicles</i>			
Same as above		Same as above	

2. Premier automobiles Ltd. (i) *Passenger cars*

The warranty applies to all original parts of the car except electric bulbs, tyres and tubes

Customer *will not be charged for labour* required to instal replacement parts.

The Company's obligation is limited to making good at the company's factory any part or parts found defective which are returned with *transportation charges pre-paid*.

(ii) *Commercial vehicles*

Same as for passenger cars

Same as above

Same as above.

3. Standard Motor Products Ltd.

(i) *Passenger cars*

The warranty covers new cars or vans or chassis or parts thereof. It does not include tyres though supplied by the company.

There is no mention in the warranty card of labour charges.

The warranty is limited to delivery, free at the company's works of repaired or new parts in exchange for those acknowledged to be defective. The parts are to be returned to the vendor who supplied the car *carriage paid* for onward transmission to the company.

(ii) *Drive-away chassis and commercial vehicles*

Same as for passenger car

Same as above

Same as above.

1	2	3	4
4. Ashok Leyland Ltd.	<p>The benefits of the warranty do not apply to bodies, coachwork, tyres, tubes and batteries. With regard to proprietary articles, which are manufactured by ancillary industries such as electric lighting sets, horns, road springs etc., and repairs or replacement to them the company will pass on to the customer the benefit of any guarantee given by such manufacturers and will on behalf of the customer take up with such manufacturers any complaints which they may have regarding the same.</p>	<p>Charges for dismantling and re-assembly whether by the company or a third party <i>shall be borne by the customer</i></p>	<p><i>Charges for carriage shall be borne by the customer.</i> The warranty is limited to repair the defective part or supply a new one in place thereof free of charge at works.</p>
5. TELCO	<p>The warranty applies to parts manufactured by the company. With regard to parts not manufactured by it but supplied by other firms such as tyres, batteries, rubber parts, electrical equipment, measuring instruments, diesel injector pumps</p>	<p>The company undertakes <i>no obligation to bear the cost of removal and refitting</i> of any parts, to the chassis for the purpose of the warranty.</p>	<p><i>The expenses of packing and freight in connection with replacement deliveries shall be borne by the purchaser.</i> The company's obligation under the warranty is limited to</p>

and accessories, the buyer shall be entitled to exercise such rights as TELCO may have against the ancillary under its warranty if any.

replacing free of charge at its works any parts of the chassis which on examination are admitted to be defective.

6. Mahindra & Mahindra .

The company's obligation under the warranty is limited to making good any part or parts including all equipment or trade accessories (except tyres) supplied by it. It makes no warranty against any defect in metal or other material in any part which cannot be discovered by ordinary factory inspection.

The authorised 'Jeep' dealer will install parts supplied under the manufacturers' warranty *without charge to the customer for parts or labour* when the vehicle is returned to his service department.

The warranty is limited to making good at the company's factory any parts which are admitted by the company to be defective and which are returned *with transportation charges prepaid*.

7. Bajaj Tempo

The Company's guarantee shall not apply to any defective parts which in the opinion of the company have been injured by wear and tear. It also does not apply to rubber components, bulbs and parts costing less than Rs. 3-00.

The customer has to pay the freight charges for sending the defective parts to the company.

The company does not take the responsibility for refunding expenses incurred by the purchaser in removing or having removed any parts and for refitting replacements.

20.2. A table showing the warranty period in respect of each of the vehicles manufactured in the country along with the details of warranty of comparable models of the collaborators is given below:

TABLE 43

Warranty period for vehicles in India and the comparable models in collaborators country for similar models.

Warranty given in India			Warranty given in the Collaborator's country	
Name of the manufacturer	Vehicle	Details	Country of collaborator	Details
1	2	3	4	5
A. Cars :				
(i) Hindustan Motors	Ambassador	12 months or 10,000 miles from the date of delivery whichever happens first.	U.K.	N.A.
(ii) Premier Automobiles	Fiat 1100	180 days or 10,000 Kms. after making delivery of such car whichever event shall occur first.	Italy	12 months or 12,000 miles or 15,000 Kms. whichever happens first.
(iii) Standard Motor Products	Standard Herald	Six months or 6,000 miles or 9,600 Kms. whichever is earlier.	U.K.	12 months or 20,000 Kms. whichever of the two events shall be earlier.
B. Jeeps and Jeep type vehicles :				
(iv) Mahindra & Mahindra		90 days or 6,400 Kms. whichever happens earlier.	U.S.A.	One year or 12,000 miles whichever happens first. Parts whose life is less than one year are not warranted.

1	2	3	4	5
C. Commercial Vehicles :				
(v) Hindustan Motors.	Bedford	90 days or 4,000 miles after delivery to the purchaser whichever event happens first.	U.K.	N.A.
(vi) Premier Automobiles	Dodge Fargo	240 days from date of sale, or 180 days from date of registration or 10,000 Kms. of vehicle's operation whichever is earlier.	U.S.A.	12 months or 12,000 miles or vehicle's operation whichever is earlier.
(vii) Standard Motor Products.	Standard 20	Six months or 6,000 miles or 9,600 Kms. whichever is earlier.	U.K.	N.A.
(viii) Ashok Leyland	Comet	Six months or 20,000 miles whichever is earlier.	U.K.	Six months or 20,000 miles whichever is earlier.
(ix) TELCO	TMB Vehicles	<p>(a) Expiration of the period during which the vehicle shall have travelled a total distance of 6000 miles from the date of despatch of the chassis from TELCO works.</p> <p>or</p> <p>(b) The expiration of six months from the date of first registration of the vehicles under the Indian Motor Vehicles Act.</p> <p>or</p> <p>(c) The expiration of a period of 12 months from the date of despatch of the chassis from TELCO works.</p> <p>whichever period first expires.</p>	West Germany	N.A.

1	2	3	4	5		
(x) Bajaj Ltd.	Tempo	(a) 3-wheeler Tempo Hanseat	months or 6,400 Kms.	(a) West Germany	Six or Kms.	months 10,000k
		(b) 4-wheeler Tempo Viking	6 months or 10,000 kms.	(b) West Germany	Six or kms.	months 10,000 kms.

D. Engines :

(xi) Simpson & Co.	Vehicular engines.	Six months or 6,000 miles or 300 hours from the date of sale of the engine to the first owner user.	U.K.	N.A.
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20.3. It would be observed that the warranty periods differ from one manufacturer to another. The purpose of specifying a warranty period is not only to win the customer's confidence but to ensure that defects in any part which may have escaped detection during the manufacturing and assembly process and various stages of inspection will show up in use and such parts will be replaced or repaired free of charge by the manufacturer. We have found variations in the warranty periods not only in India but also in other countries. In our opinion what is required is a determination of the minimum period of usage or mileage run during which defects of this nature could reasonably be expected to show up. The period of warranty should not be less than this minimum. If any manufacturer wishes to give a longer warranty period to win his customer's confidence he may do so.

20.4. The users have pointed out that one of the essential conditions in the warranty is that the repair or servicing should be done at a station approved by the manufacturers. Breakdowns invariably occur while the vehicle is on the road and there may be instances when the vehicle is far away from the approved service station and the user would rather have the defect repaired at the nearest available service station at his own expense than have the vehicle removed to the approved station. But the terms of some warranties stipulate that such repair or servicing would render the warranty void.

20.5. According to the terms of the warranty in many cases, parts can be replaced or repaired only after examination at the factory where they have to be sent at the customer's cost. Hindustan Motors and Mahindra & Mahindra have authorised their dealers to effect necessary repairs and replacements in terms of the warranty and on completion of the work to submit warranty claim to them.

20.6. In several cases the labour charges for removing defective parts and refitting replacements have to be borne by the customers. This point was brought to the notice of the Commission even at the time of the last inquiry in 1956. Only Premier and Mahindra & Mahindra have categorically stated in the warranties that the labour charges will be paid by the company. In some cases particularly if the engine or gear box has to be opened the labour charges are liable to be more than the cost of a small replacement part. In our opinion where defects are admitted under warranty claims the labour charges should be borne by the manufacturers.

20.7. There are differences even in the number of parts covered by the warranty. Tyres and tubes are excluded from all warranties because these are separately warranted by the tyre manufacturers. Premier Automobiles and Bajaj-Tempo do not warrant electric bulbs. The list of exceptions is larger in the case of Ashok Leyland and TELCO as may be seen in Table 42. Ashok Leyland has stated that the items excluded are covered by separate warranties and it will—on behalf of the customer—take up warranty claims in respect of these items with the respective ancillaries. We understand the practice of TELCO is the same though not specifically stated. In its Report of 1956 the Commission had observed that the manufacturers should undertake full responsibility for all the parts fitted to their vehicles without making any distinction for the purpose of their warranties between the parts manufactured by them and those purchased from other sources. It is for the automobile manufacturers to arrange settlement of claims with the ancillary manufacturers who supplied the components and the owner should not be made to deal with a number of agencies. He should be provided with redress by the manufacturer or his authorised dealer irrespective of the outcome of the claim which may subsequently be

made by the manufacturer on the ancillary unit which supplied the original equipment.

20-8. Hindustan Motors, Mahindra & Mahindra, Standard Motor Products and Bajaj-Tempo have made no changes in the warranty during the last ten years. Premier Automobiles has liberalised its warranty. Previously the warranty on Fiat cars became null and void if the car was sold by the first purchaser. From March 1957 the balance of the warranty is made applicable to the second purchaser subject to some conditions. In the case of the Dodge vehicles previously the warranty was applicable for 90 days or 3,000 miles from the date of purchase. From November 1958 this warranty was revised and made applicable for 180 days or 6,000 miles (10000 KM) whichever event occurs first from the date of purchase. In the case of commercial vehicles the warranty has been revised from December 1961 to 240 days from the date of purchase or 180 days from the date of registration or 6,000 miles (or 10,000 KM) whichever event occurs first (allowing 60 days grace period for body building). Ashok Leyland has also made a revision in the warranty period. Originally when all the components including the proprietary items such as dynamo, starter motor, propeller shafts, etc. were imported, the warranty period was six months or 20,000 miles. Since the establishment of indigenous manufacture, the ancillary manufacturers have reduced the warranty period as follows and Ashok's warranties stand amended accordingly:

Mico fuel pump	.	.	.	Six months or 10,000 KM.
Gabriel Shock absorbers	.	.	.	Ditto.
Ex-Cell-O propeller shafts	.	.	.	Six months or 19,200 KM.
Yenkey instruments	.	.	.	Six months.

TELCO has made no significant changes in the warranty policy and procedures right from the inception of T.M.B. vehicle production.

20.9. Manufacturers undertake to carry out a limited number of free servicings during the warranty period for the vehicles sold by them. This service as stated earlier is rendered by the dealer on behalf of the manufacturer whom they represent. Details of free services given by the Indian manufacturers and their collaborators abroad are given below:

TABLE 44

Free services given by Indian automobile manufacturers and their collaborators for similar vehicles in India and abroad

In India	In Collaborators' Country
1	2
A. CARS	
<i>Ambassador</i>	
Three free services at 500 miles, 1500 miles and 2500 miles.	N. A.
<i>Fiat 1100</i>	
Three free services at :	Two free services at :
(i) 500/800 Kms.	(i) 1500/2000 Kms.
(ii) 1500/2000 Kms.	(ii) 3000/4000 Kms.
(iii) 3500/4000 Kms.	
<i>Standard Herald</i>	
Two free check up services at :	One free check up service at
(i) 500 miles.	1000 miles.
(ii) 1500 miles.	
B. JEEPS AND JEEP VEHICLES	
Pre-delivery inspection and two free services at :	Pre-delivery inspection and only one free inspection service
(i) 1000 miles and	at 1000 miles.
(ii) 2000 miles	
No free service to vehicles supplied to army.	

1

2

C. COMMERCIAL VEHICLES

Bedford vehicles

Two free services at :	N. A.
(i) 1500 Kms.	
(ii) 3000 Kms.	

Dodge/Fargo trucks

Two free services at :	One free service at 1600 Kms.
(i) 1600 Kms.	
(ii) 5000 Kms.	

Ashok's trucks

Pre-delivery inspection and two free services at :	Pre-delivery inspection and free service at 500 miles.
(i) 500 miles ;	
(ii) 4000 miles.	

TMB Vehicles

Pre-delivery inspection and four free services within the first 8000 Kms.	No free service at all.
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Bajaj's 3-Wheeler

Three free services and three concessional services.	Two free services and four concessional services used to be given when this type of vehicles were sold.
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Bajaj's 4-Wheeler

Three free services and eight paid services recommended	Three free services and eight paid services recommended.
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On the whole it seems from the above that the servicing facilities given by the Indian manufacturers during the warranty period are comparatively liberal.

21.1. The distribution and sale of passenger cars and commercial vehicles were brought under statutory control in 1959 and 1963 respectively. The Motor Cars (Distribution and Sale) Control Order was promulgated in 1959 closely following the foreign exchange crisis of 1958 when the automobile manufacturers were asked to restrict their models and concentrate on fewer models which needed less foreign exchange. Consequently, production of cars went down and it coincided with an upward surge in demand for passenger cars. Orders booked with dealers indicated that a customer had at least to wait for 12 months before getting the delivery of a car and this situation called for a regulated supply of vehicles under which manufacturers and the dealers were required to deliver the vehicles in the order of registration and with no discrimination. The Motor Car (Distribution and Sale) Control Order is applicable to the cars manufactured in India, namely, Ambassador, Fiat 1100 and Standard Herald. A copy of this Order alongwith the subsequent amendments is reproduced in Appendix XIII. A Controller appointed under this Order, makes allocations for distribution of cars and quotas have been fixed for Central and State Governments, L.I.C., Taxi trade and discretionary quota to the manufacturer.

21.2. Based on the information furnished to us by the Controller of passenger cars, the current quotas are as under :

Central Government quota per quarter

Ambassador...500 Nos. Fiat...300 Nos. Standard...150 Nos.

State Government quota—5% of the number of cars allocated to a State/Centrally Administered Territory subject to the following minimum of cars per quarter :

- (a) States—15 Nos. each of Ambassador and Fiat, and 10 Nos. of Standard.
- (b) Delhi Administration—10 Nos. of Ambassador and 15 Nos. of Fiat and 5 Nos. of Standard.
- (c) Centrally Administered Territories other than Delhi—7 Nos. each of Ambassador and Fiat and 5 Nos. of Standard.

L. I. C. quarterly quota

Ambassador	10 Nos.
Fiat	2 Nos.
Standard	2 Nos.
(Constant for the last five years)	

Taxi quota

10 % of production of each make of car (Constant)

Manufacturer's quota

3 % of their monthly production (Constant)

Special Taxi quota

- (i) Calcutta, Bombay, Delhi 10 cars of each make per quarter for each city.
- (ii) Madras, Hyderabad, Bangalore. 5 cars of each make per quarter for each city.

21.3. The Commercial Vehicles (Distribution and Sale) Control Order was brought into force in 1963, perhaps, because of the need for regulating the supply of these vehicles after the Chinese aggression in 1962. In addition to the commercial vehicles manufactured by Hindustan Motors, Premier Automobiles and Standard Motors and all vehicles manufactured by TELCO and Ashok Leyland, the Order also covered the 3-wheeler vehicles manufactured by Bajaj Tempo Ltd. (Tempo Hanseat) Bajaj Auto Ltd. (Vespa-3-wheeler) and A. P. I. Ltd. (Lambretta 3-wheeler). The jeep trucks manufactured by Mahindra & Mahindra also came within the purview of this Order. Government of India in the Ministry of Industrial Development and company Affairs, Department of Industrial Development by its Order dated 19th September, 1967 has recently lifted the Control Order on the commercial vehicles as it was considered no more necessary to regulate the distribution and sale of these vehicles in view of the fact that these vehicles are available in sufficient number at present. We are however informed that considerable orders are pending in respect of T.M.B. and Ashok Leyland vehicles. As

on 30th September 1967 the total number of orders pending with these two manufacturers according to the data furnished to us are 10064 and 467 respectively. Dodge/Fargo and Bedford trucks have always been available without registration.

21.4. As stated in the previous paragraph, with the lifting of control on commercial vehicles recently only passenger cars are now subject to statutory control. The recession which has generally hit the industry as stated by us earlier seems to have had no impact on the demand for passenger cars. The table below shows the effective registrations of passenger cars as at the end of each of the last five years and as on 30th September 1967.

TABLE 45

Unit-wise registration for passenger cars.

Model	(In nos.)					
	Effective registration as at the end of					
	1962	1963	1964	1965	1966	1967 (Sept.)
Ambassador .	8,158	30,404	57,998	51,677	59,983	54,151
Fiat 1100 .	20,574	31,360	52,533	58,217	57,376	52,331
Standard .	N.A.	N.A.	N.A.	2,663	5,339	3,806
TOTAL .	28,732	61,764	1,10,531	1,12,557	1,22,698	1,10,288

It will take a number of years to clear the back log. On the question of continuing the control orders on passenger cars opinions received by us were divided. The Association of Automobile Manufacturers has expressed the view that till such time as there is a substantial increase in the production of cars in the country the control orders and the car registration scheme may continue. This view is shared by one of

the passenger car manufacturers also. As against this, the other manufacturers opined that there is improvement in the supply position due to recent liberalisation of imports, greater indigenous content and marked development of the ancillary industry as also the present increase in the trend of production which would enable greater supply of these vehicles in the market. These manufacturers have contended that the Control Order on passenger cars under the circumstances will be more a hindrance to the growth of the industry and hence needs to be repealed.

22.1. During the last five years jeeps and jeep type vehicles have been normally available within a period of six to ten weeks except during situations of extreme emergencies when supply had to be diverted to defence

22. Sales. requirements. Table No. 46 indicates details of sales effected during the last six years and during the period January to September 1967 in respect of the automobiles manufactured in the country. Information regarding production during each of the six years and during the period January to September, 1967 has also been given in the table to facilitate ready comparison. It may be seen that sales have been keeping pace with production and stocks of different vehicles, including engines at the end of each year have been negligible. In the case of passenger cars 1963 was a year of poor sales. However, sales picked up next year and thereafter the upward trend has been maintained. As against this, commercial vehicles show record sales during the year 1965. In the years following there has been a slight fall. The sales of jeep went up from 1961 onward but declined in 1966. The first nine months of 1967 also indicate a further fall. The sales of Simpson being dependent upon the production of commercial vehicles by Premier Automobiles and Hindustan Motors necessarily felt the impact of low demand from these two companies.

22.2. At the public inquiry we were informed that the sales of 1-tonne trucks have not been satisfactory in the past and so far not even 3,000 trucks have been sold. We have observed in an earlier paragraph that the demand for these vehicles is of a limited nature.

TABLE 46
*Production and sales during each year since 1961
of automobiles*

(in Numbers)

Particulars	1961	1962	1963	1964	1965	1966	1967 (Jan.- Sept.)
<i>Cars</i>							
Production during .	21,663	23,326	15,711	23,227	24,790	27,597	24,909
Sales during .	21,776	23,247	14,864	23,596	24,973	27,869	24,909
<i>Commercial Vehicles</i>							
Production during .	26,810	27,581	28,769	33,607	37,403	35,208	23,221
Sales during .	27,205	26,919	28,891	33,563	36,518	35,580	23,764
<i>Jeeps</i>							
Production during .	5,959	6,909	7,815	10,300	10,483	9,807	4,712
Sales during .	5,964	6,579	9,840	10,049	10,627	9,833	4,749
<i>Engines</i>							
Production during .	9,761	7,653	7,993	7,625	7,847	6,706	2,238
Sales during .	9,738	7,672	7,955	7,676	7,841	6,668	2,217

22.3. Simpson & Co. has informed us that Hindustan Motors has cancelled all the orders of engines beyond July 1967, and that Premier has not made any commitment to it beyond August 1967. The Company therefore presented to us a pessimistic picture of its automobile engine manufacturing programme particularly because its proposal for manufacturing chassis was in a nebulous stage. In this connection we would like to state that the Commission in its last Report of 1956 had definitely held the view that it did not support the manufacture of automobile diesel engines by

Hindustan and Premier in addition to Simpson & Co. In spite of Commission's recommendations Government by its letter dated 12th September 1963 had licensed Hindustan Motors for the manufacture of 15,000 Automotive diesel engines per annum which included 3,000 petrol engines, and licensed Premier Automobiles also for the manufacture of 15,000 automotive diesel engines per annum, inclusive of Meadows diesel and petrol engines already being manufactured by it. On the same date a licence for the manufacture of 12,000 chassis was issued to Simpson & Co.

22.4. The licensed capacity of Simpson & Co. as intimated by the producer is 12,000 nos., as against which its balanced installed capacity for vehicular engines is only 6,000. It has further informed us that no additional capacity has been installed as far as vehicular engines are concerned. Production of P6-V engines which was 9761 in 1961, came down to 5835 engines only in 1966.

22.5. In explaining the circumstances under which different licences were issued to manufacturing units the Ministry of Industrial Development has informed that "the licence granted to Simpsons for the manufacture of 3-5 ton trucks, which is however not being implemented was granted for a different consideration, namely, to enable them to utilise the Perkins engines manufactured by them, which would become surplus with them after Premier and Hindustan who purchases engines from them manufactured their own engines for which they have been licensed."

22.6. We are informed that Premier has not been able to do so mainly because the necessary foreign exchange for the purchase of capital goods to implement this licence has not so far been released to it. In view of the fact that Simpson has to cater to the demand of Premier Automobiles only, it has estimated the future demand of vehicular engines at 6,000 per annum for the period 1968-1973. This, of course, depends on improvement in the current recession conditions.

22.7. What the Commission had apprehended in 1956 relating to engine production in the country appears now to have proved true. Already there are a number of truck manufacturers in the country and adding Simpsons also to

these will not be an economically justifiable proposition. The clarification offered by Government with regard to licensing Simpson to manufacture a chassis with a view to utilise its own engines also is not quite convincing since fragmentation of a small volume of production is not at all desirable. If Simpson takes up production of Chassis only to utilise its own production of engines it would further fragment the chassis production in the country. Now that Hindustan Motors has one ahead with the implementation of its licences for the production of engines, the only alternative would be not to allow Premier to implement its licence for the manufacture of **engines**.



CHAPTER VII

FOREIGN TRADE

23.1. Import control policy :

23.1.1. For the purpose of import control, automobiles and components are classified under Serial Nos. 291, 292, 293, 296 and 297 of Part IV of the import Trade Control Schedule. Serial No. 86 of Part V of the Schedule also covers certain specialised types of vehicles. The import control policy pursued by Government from the licensing period October 1957—March 1958 to the current period, namely, April 1967—March 1968 is given in Appendix XIV. It will be observed that the import policy has been highly restrictive. During the current licensing period, there is a complete ban on imports of automobiles as well as certain specialised types of vehicles falling under Sl. No. 86 and referred to above.

23.1.2. We are informed by the Chief Controller of Imports and Exports that import of built-up cars involving no foreign exchange by Indians/foreigners as baggage and by ex-Rulers of Indian States and Branch Offices of foreign companies in India for personal use is allowed subject to certain rules and conditions. Further, Indian refugees arriving from East Africa for permanent settlement in India are allowed to import one motor vehicle per family in their use provided no foreign exchange is involved and other conditions are fulfilled.

23.2. Imports :

23.2.1. Table No. 47 showing imports by quantity and value of cars and jeeps, commercial vehicles and motor vans into India during the last ten years as published in the Monthly Statistics of the Foreign Trade of India is given on the next page. Details of country-wise imports during this period are shown in Appendix XV.

TABLE 47

Import of different types of vehicles to India since 1957

A. CARS AND JEEPS

Year	Passenger vehicles Excluding Jeeps Landrovers			Complete Knocked- Down Cars			Second Hand or Used Motor Cars			Chassis Engine Mounted on Vehicles			Jeeps & Landrovers		
	No.	Value	No.	No.	Value	No.	Value	No.	Value	No.	Value	No.	No.	Value	(Value in Rupees)
1957	.	.	.	247	20,27,843	9,737	4,19,43,257	67	5,82,345	528	64,25,419	2,043	1,06,07,731		
1958	.	.	.	370	32,73,500	7,570	2,19,08,858	29	2,43,853	43	2,95,754	548	46,07,731		
1959	.	.	.	130	14,63,223	6,331	1,88,72,001	102	8,40,080	564	11,65,987	2,996	1,83,89,648		
1960 (Jan-March)	.	.	.	11	97,939	1,788	47,79,370	73	6,29,781	3	24,209	48	5,78,812		
1960-61	.	.	.	68	7,93,413	3,744	1,16,90,780	284	25,64,560	1	9,264	382	35,61,109		
1961-62	.	.	.	286	23,53,850	398	15,60,143	396	34,53,948	3	26,104	308	34,48,438		
1962-63	.	.	.	137	17,55,604	58	5,82,317	286	24,92,335	..	..	120	15,86,012		
1963-64	.	.	.	76	9,69,590	..	..	308	27,76,432	..	..	221	27,88,815		
1964-65	.	.	.	117	12,40,004	..	..	248	19,25,626	8	2,91,839	179	22,08,813		
1965-66	.	.	.	114	19,00,081	..	..	255	25,09,709	53	18,16,415	68	9,01,768		
1966-67	.	.	.	54	8,06,714	..	..	87	9,89,613	..	..	154	26,35,517		

B. COMMERCIAL VEHICLES

(Value in Rupees)

Year	Buses Whether or not Assembled	Lorries, Trucks Whether or not Assembled	Lorries etc. second Hand or used.	Lorries, Etc. Complete or not Assembled	Special Purpose Trucks, vans Assembled or not.	Engine mounted on vehicles Listed in 73203	Fire Engines	Motor Omnibuses.
	No.	Value	No.	Value	No.	Value	No.	Value
1957	..	..	..	..	..	1,245 1,42,37,163	29 11,44,876	555 21,82,878
1958	..	..	..	..	..	1,003 1,20,89,626	23 19,76,294	97 24,59,790
1959	..	..	..	..	..	3,624 2,43,00,370	11 3,05,074	39 12,58,607
1960 (January to March).	..	..	..	..	..	4 2,15,002	..	..
1960-61	..	..	..	..	..	391 44,31,558	5 1,95,681	40 13,20,319
1961-62	..	..	..	..	..	12 7,41,680	4 3,46,890	2 49,178
1962-63	..	..	..	..	..	31 8,67,365	2 2,60,818	1 17,377
1963-64	..	..	..	..	..	271 54,93,808	4 3,85,313	1 13,768
1964-65	..	..	..	..	..	3 1,30,505	5 3,81,351	..
1965-66	21	7,61,891	166	1,39,67,958	8	7,74,446 139 13,11,671	..	..
1966-67	8	1,85,770	113	71,08,006	30	3,55,881 1 36,687	3 2,77,354	..
							1 2,80,573	..

23.2.2. The statement reveals that imports have been erratic depending upon the Government's import policy and that the main sources of supply for passenger cars were U.S. A. and U.K. Commercial vehicles came mainly from U.K., U.S.A., West Germany and Japan; jeeps from U.S.A. and Japan; and omnibuses from U.K. although in 1960-61 a few omnibuses were imported from Italy also. Since 1962-63 Russian vehicles have also been imported. Imports from U.K. and West Germany accounted for C.K.D. vans, while Japan, U.S.A. and U.K. were the principal exporters of engine mounted chassis of vehicles.

24.1. India's exports of automobiles from 1960-61 to 1966-67 as published in the Monthly Statistics of the Foreign Trade of India are given in Table 48, while

24. Exports. the country-wise details are shown in Appendix. XVI. The figures reveal that the export performance has considerably improved during the last four years. As against Rs. 3 lakhs worth of exports during 1960-61, the exports increased to Rs. 22 lakhs in 1963-64, Rs. 71 lakhs in 1964-65 and Rs. 106 lakhs in 1966-67. The exports in 1965-66 received a slight set-back and stood at Rs. 63 lakhs. The exports in 1966-67 comprised mostly new passenger cars and commercial vehicles. Second hand cars and jeeps accounted for less than Rs. 1 lakh each. No engine-mounted chassis was exported during 1966-67 as against 128 Nos. valued at Rs. 19 lakhs exported during the previous year. The unit value of exports of engine-mounted chassis during 1965-66 was substantially less than that during the earlier years. The principal countries to which exports were made were Nepal, South Vietnam and Ceylon.

TABLE 48

India's exports of automobiles during the last seven years

(Value in '000 Rs.)

Type of vehicle	1960-61		1961-62		1962-63		1963-64		1964-65		1965-66		1966-67	
	Nos.	Value	Nos.	Value	Nos.	Value	Nos.	Value	Nos.	Value	Nos.	Value	Nos.	Value
1. Passenger cars (New), excluding jeeps and land rovers	5	41.8	3	28.2	3	30.3	2	28.7	79	1,706.5	104	2,577.2	217	4,681.4
2. Second hand or used motor cars	4	14.9	9	76.4	2	20.5	1	10.0	4	39.3	12	49.4	8	82.5
3. Jeeps and land rovers	..	..	2	32.6	1	11.8	1	13.1	..	..	5	47.9	5	55.9
4. Buses, lorries, truck whether or not assembled including special purpose lorries, trucks, vans etc.	..	..	1	24.7	..	..	66	1,161.1	122	3,597.3	80	1,754.6	310	5,783.9
5. Engine mounted chassis of vehicle	13	244.5	4	67.8	14	253.2	55	1,005.1	86	1,735.9	128	1,878.3	..	..
TOTAL	22	301.2	19	229.7	20	315.8	125	2,218.0	291	7,079.0	329	6,308.4	440	10,583.5

24.2. We have also received information from individual manufacturers. Among passenger car manufacturers, Hindustan Motors is the only producer which has effected exports as may be seen from the table below :—

Year	Number	Value (Rs.)
1961-62	2	23,157
1962-63	4	46,734
1963-64	4	50,751
1964-65	10	1,37,713
1965-66 . . . . .	..	..
1966-67	20	2,96,407

The cars were exported to Nepal. When these figures are compared with those published by the D.G.C.I.&S., a considerable degree of discrepancy is noted for the last three years. Perhaps the figures given by the manufacturer relate to only exports effected directly and do not include those exported by Governmental Agencies from among the vehicles purchased by D.G.S. & D. We are therefore unable to offer any comments on this.

CHAPTER VIII

PROTECTION

25. The relevant items of the First Schedule to the Indian Tariff Act, 1934, which form the subject matter of the present inquiry are 75, 75(1), 75(3), 75(9), 75(10), 75(11), 75(12) and 75(14). Extracts from the First Schedule indicating the current rates of duty in respect of these items are given below :

TABLE 49
Current rates of duty on automobiles

Item No.	Name of article	Nature of duty	Standard rate of duty	Preferential rate of duty if the article is the produce or manufacture of			Duration of protective rates of duty
				The United Kingdom	A British Colony	Burma	
1	2	3	4	5	6	7	8
*75	Conveyances not otherwise specified and component parts and accessories thereof other than parts and accessories of motor vehicles, batteries, and articles specified in Item No. 75(12A), also motor vans and motor lorries imported completely assembled.	Revenue	60 per cent <i>ad valorem</i>	..	..	10 per cent <i>ad valorem</i>	..
75(1)	Motor cars, including taxi cabs, imported completely assembled.	Revenue	150 per cent <i>ad valorem</i>	..	..	20 per cent <i>ad valorem</i>	..

*See notes below.

	2	3	4	5	6	7	8
*75(3)	Motor omnibuses imported completely assembled. NOTE: Motor vehicles, other than motor cycles and motor scooters, when imported otherwise than in a completely assembled condition, shall be dutiable as articles or parts of articles under Item Nos. 75(9), 75(10), 75(11), 75(12), 75(12A), 75(14), 75(15), 75(16) or 75(18) (b) as the case may be.	Preferential Revenue	60 per cent <i>ad valorem</i>	52½ per cent <i>ad valorem</i>	..	5 per cent <i>ad valorem</i>	..
*75(9)	The following articles and parts thereof adapted for use as parts and accessories of motor vehicles other than motor cycles and motor scooters : (i) the following engine components: rubber mountings, hosepipes (other than fuel line hoses) with connections, fuel pump diaphragms fan belts, mufflers exhaust pipes and tail pipes ; (ii) the following frame and body components : carpets (made to size or shape) cushion springs, doors and window fittings, excluding glasses, trim materials (leather, plastic jute canvas and leather cloth), made to size or shape, bus bodies, station wagon bodies, truck bodies, steel cabs for lorries, pick up bodies and parcel van bodies ; and (iii) the following other components: gaskets all sorts, rubber components not otherwise specified and horns not otherwise specified.	Protective	50 per cent <i>ad valorem</i>	..	..	..	December, 31st 1968.



*See notes below.

1	2	3	4	5	6	7	8
*75(10)	The following articles and parts thereof, adapted for use as parts and accessories of motor vehicles other than motor cycles and motor scooters :	Protective	50 per cent <i>ad valorem</i>	..	..	..	December 31st 1968
	(i) The following engine components : crank shafts, cam shafts, connecting rods, cylinder blocks and heads, manifolds, valves, valve springs, valve tappets, fly wheels, petrol tanks, radiators, fans, piston assembly, pistons, piston rings and gudgeon pins, other than those specified in Item No. 75 (12A) water pumps, timing gears and sprockets.						
	(ii) the following electrical components : lamps other than head lamps wire harness, battery and other cables made to size and horns ;						
	(iii) the following transmission and suspension components : king pins, shackle pins, shock absorbers, spring hanger brackets, shackles transmission gear and gear box, clutch housings, propeller shafts, universal joints including needle bearings therefor, rear axle assembly (axle housing, axle shaft, ring gear pinion and carrier differential), front axles, hubs and brake drums and front suspension excluding coil springs ;						



*See notes below

1	2	3	4	5	6	7	8
	(iv) the following frame and body components : seat runners, short members of chassis frame and brackets; and						
	(v) the following other components: brake hose pipes bushings separately imported (excluding oil impregnated bushings) and bumpers.						
*75(11)	The following articles and parts thereof adapted for use as parts and accessories of motor vehicles other than motor cycles and motor scooters, namely :	Protective 50 per cent <i>ad valorem</i>	..	..	..	December 31st 1968	
	(i) the following engine components : thin wall bearings, cylinder liners, carburetors, oil pumps, air cleaners, oil filters, fuel pumps and fuel line hose switch connections;						
	(ii) the following electrical components: distributors, sparking plugs not otherwise specified, direction indicators, electrical panel instruments, wind shield wipers, starting motors, generators, head lamps including sealed beams, fuses, switches, ignition coils, and voltage and current regulators ;						
	(iii) the following transmission and suspension components : steering mechanisms, pressed wheel clutches and suspension coil springs ;						



* See notes, below

1	2	3	4	5	6	7	8
	(iv) the following frame and body components : toughened glass sheets, and long members of chassis frames ; and						
	(v) the following other components roller bearings bushings (oil impregnated), panel instruments other than electrical and brake cylinders.						
*75(12)	Articles other than rubber tyres, tubes, batteries and such other components as are specified in Item Nos. 72(35), 75(9), 75(10), 75(11), 75(14), 75(15), 75(16) and 75 (18) (b) (ii) adapted for use as parts and accessories of motor vehicles other than motor cycles and motor scooters.	Protective	50 per cent <i>ad valorem</i>	..	..	..	December 31st, 1968
*75(14)	Body panels including turret tops and sides for passenger motor cars including taxicabs.	Protective	50 per cent <i>ad valorem</i>	..	..	..	December

Item No.	Notes
75	<p>(1) Under Government of India, Ministry of Finance (Revenue Division), Notification No. 167-Customs, dated the 15th October, 1955, as subsequently amended by Ministry of Finance (Department of Revenue), Notifications No. 108-Customs, dated the 16th May, 1957 No. 20-Customs, dated the 1st March, 1960, Nos. 25-Customs, dated the 2nd February, 1963 No. 80-Customs, dated the 1st March, 63, No. 131-Customs, dated the 20th August, 1965 and No. 105-Customs, dated the 6th June, 1966 articles specified in the Schedule noted below are exempt from the payment of so much of that portion of the Customs duty leviable thereon which is specified in the First Schedule to the Indian Tariff Act, 1934, as is in excess of 27½ per cent <i>ad valorem</i>.</p> <p style="text-align: center;">SCHEDULE</p> <p>1. Trucks, propelled by self-contained power, designed principally for loading, unloading, stacking or tiering of goods, and counter weighted or designed to be counterweighted at the steering axle end to enable loads to be handled on forks or other attachments to elevating masts at the driving axle end, including any of the following equipment or attachments imported with and for use with such trucks, <i>viz.</i>, special forks, crane attachment, boom attachment, scoop attachment, roll-over or revolving head attachment, drum carrying attachment, side shifting attachment, squeeze, gripping attachment, steady attachment, or clamp lift, brick forks, bale carrying attachment, platform attachment, drum handling attachment, coal grab attachment, push pull attachment, pusher attachment, case grab attachment and end or side dumping skip.</p> <p>2. Trucks, elevating platform, propelled by self-contained power, and with platform elevation not exceeding 12 inches.</p>

*See notes below.

Item No.	Notes
75	(2) Under Government of India, Ministry of Finance (Department of Revenue), Notification No. 209-Customs, dated the 18th September, 1957, as subsequently amended by Notifications No. 20-Customs, dated the 1st March, 1960, No. 25-Customs, dated the 2nd February, 1963, No. 80-Customs, dated the 1st March, 1963, No. 131-Customs, dated the 20th August, 1965 and No. 105-Customs, dated the 6th June, 1966 every mobile crane having a carriage which forms an integral part of the crane falling under this Item is exempt from the payment of so much of that portion of the Customs duty leviable thereon which is specified in the First Schedule to the Indian Tariff Act, 1934 as is in excess of 27½ per cent <i>ad valorem</i> .
75	(3) Under Government of India, Ministry of Finance (Department of Revenue), Notification No. 141-Customs, dated the 10th May, 1958 as subsequently amended by Notification No. 20-Customs, dated the 1st March, 1960 No. 26-Customs, dated the 2nd February, 1963, No. 131-Customs, dated the 20th August, 1965 and No. 105-Customs, dated the 6th June, 1966 aircraft (other than aeroplanes) such as autogyros, air-ships and the like, their parts, their engines and parts of such engines are exempt from the payment of so much of that portion of the Customs duty leviable thereon which is specified in the First Schedule to the Indian Tariff Act, 1934, as is in excess of 27½ per cent <i>ad valorem</i> .
75	(4) Under Government of India, Ministry of Finance (Department of Revenue and Insurance), Notification No. 104-Customs, dated the 6th June, 1966 the Central Government hereby exempts goods falling under this item from so much of that portion of the duty of Customs leviable thereon which is specified in the First Schedule to the Indian Tariff Act, 1934 as is in excess of the duty leviable at the rate of 50 per cent <i>ad valorem</i> .
75	(5) Under Government of India, Ministry of Finance (Department of Revenue and Insurance), Notification No. 46-Customs, dated the 3rd May, 1967, the Central Government hereby exempts. <ul style="list-style-type: none"> <li data-bbox="246 885 940 977">(a) helicopters imported predominantly for use in agricultural operations and certified by the Director General of Civil Aviation that they have been imported for such use, from so much of that portion of the duty of Customs leviable thereon which is specified in the First Schedule to the Indian Tariff Act, 1934, as is in excess of 15 per cent <i>ad valorem</i>. <li data-bbox="246 986 940 1138">(b) Parts of helicopters imported <ul style="list-style-type: none"> <li data-bbox="267 1014 940 1042">(i) for use in helicopters referred to in clause (a) or <li data-bbox="267 1051 940 1138">(ii) for use in helicopters predominantly used in agricultural operations and imported before the date of this notification from so much of that portion of duty of Customs leviable thereon which is specified in the First Schedule to the Indian Tariff Act, 1934, as is in excess of 15 per cent <i>ad valorem</i>. <p data-bbox="267 1153 940 1328">Provided that the importer by execution of a bond in such form and in such sum as may be prescribed by the Assistant Collector of Customs, binds himself to pay on demand in respect of such part as are not proved to the satisfaction of the Assistant Collector of Customs, within six months from the date of their importation or within such further period as the said Assistant Collector may allow beyond the period of six months to have been used in any of the helicopters referred to in this clause, an amount equal to the difference between the duty leviable on such parts but for the exemption contained herein and that paid at the time of importation.</p>
75(1)	(1) Under Government of India, Ministry of Finance (Department of Revenue), Notification No. 25-Customs, dated the 1st March, 1964, motor cars, including taxi cabs, completely assembled, falling under this Item, are exempt from the payment of so much of that portion of the Customs duty leviable thereon which is specified in the Indian Tariff Act, 1934, as is in excess of 60 per cent <i>ad valorem</i> .
75(1)	(2) Motor cars including taxi cabs is a GATT Item.

Item No.	Notes
75 and 75(1)	(1) Under Government of India, Ministry of Finance (Department of Revenue), Notification No. 224-Customs, dated the 3rd August, 1958, as subsequently amended by Notification No. 143-Customs, dated the 26th December, 1961, goods, specified in column 1 of the Table below are exempt from the payment of Customs duty leviable thereon, subject to the terms and conditions specified in column 2 of the said Table :

Name of goods	Terms and conditions of exemption
1. Vehicles as defined in Article 1 of the Convention.	1. The following persons are excluded from the benefits of the exemption.
2. Fuel and component parts referred to in Articles 3 and 4 respectively of the Convention.	(a) legal persons referred to in Article 1(c) of the Convention : (b) persons normally resident outside India (or the State of Pondicherry), who on the occasion of a temporary visit to India (or the State of Pondicherry) take up paid employment or any other form of gainful occupation.
	2. The importer shall—
	(a) be a member of an Automobile Club or Association belonging to the Federation Internationale De L'Automobile or to the Alliance Internationale de Tourisme.
	(b) produce to the Customs Collector for the purpose of the same being duly signed and stamped by him the triptych or Carnet de Passages en Douane issued by the Federation Internationale De L'Automobile or by the Alliance Internationale de Tourisme in the form approved and issued to him by a Club or Association guaranteed by the Western India Automobile Association and in respect of which all the rules and conditions relating to Triptych or Carnet de Passages en Douane have been complied with ; and
	(c) Satisfy the aforesaid officer that the vehicles and component parts which he has imported, correspond in all respects with those described in the Triptych or Carnet de Passages en Douane and for this purpose produce the said vehicles and component parts for examination and record of particulars by such officer.
	3. Notwithstanding any thing to the contrary contained in the convention, the period of validity of temporary importation papers, that is, Triptych or Carnet de Passages en Douane, shall be limited to six months from the date of importation of the vehicle into India
	4. Generally subject to the provisions of the Convention.

Explanation :—In this notification, "Convention" means the Customs Convention on the Temporary Importation of Private Road Vehicles (reproduced in the Gazette of India).

Item No.	Notes
75(9)	<p>(1) Under Government of India, Ministry of Finance (Revenue Division), Notification No. 42-Customs, dated the 31st May, 1953, as subsequently amended by Ministry of Finance (Department of Revenue), Notifications No. 17-Customs, dated the 1st March, 1961, No. 25-Customs, dated the 2nd February, 1963 No. 131-Customs, dated the 20th August, 1965 and No. 105-Customs, dated the 6th June, 1966, articles and parts thereof adapted for use as parts and accessories of motor vehicles other than motor cycles and motor scooters if of the United Kingdom manufacture, are exempt from the payment of so much of that portion of the Customs duty leviable thereon which is specified in the First Schedule to the Indian Tariff Act, 1934, as is in excess of 42½ per cent <i>ad valorem</i> :</p> <p>Provided that the said articles are not also adapted for use as parts and accessories of motor cars, including taxi cabs.</p> <p>(2) Articles (other than rubber tyres and parts and tubes) adapted for use as parts and accessories of Motor Cars including Taxi cabs are GATT Items.</p>
75(10) and 75(11)	<p>(1) Under Government of India, Ministry of Finance (Revenue Division), Notification No. 42-Customs, dated the 31st May, 1953, as subsequently amended by Ministry of Finance (Department of Revenue), Notifications No. 17-Customs, dated the 1st March, 1961, No. 25-Customs, dated the 2nd February, 1963, No. 80-Customs, dated the 1st March, 1963, No. 131-Customs, dated the 20th August, 1965 and No. 105-Customs, dated the 6th June, 1966, articles and parts thereof adapted for use as parts and accessories of motor vehicles, other than motor cycles and motor scooters falling under Items Nos. 75(10) and 75(11), if of the United Kingdom manufacture, are exempt from the payment of so much of that portion of the Customs duty leviable thereon which is specified in the First Schedule to the Indian Tariff Act, 1934 as is in excess of the rates specified in column 2 of the Schedule below :</p> <p>Provided that the said articles are not also adapted for use as parts and accessories of motor cars including taxi cabs.</p>
SCHEDULE	
Item No.	Reduced preferential rate
1	2
75 (10)	42½ per cent <i>ad valorem</i>
75(11)	42½ per cent <i>ad valorem</i> .
75(10) and 75(11)	<p>(2) Articles (other than rubber tyres and parts and tubes) adapted for use as parts and accessories of Motor Cars including Taxi cabs are GATT Items.</p>
73(12)	<p>(1) Under Government of India, Ministry of Finance (Revenue Division), Notification No. 42-Customs, dated the 31st May, 1953, as subsequently amended by Ministry of Finance (Department of Revenue), Notifications No. 17-Customs, dated the 1st March, 1961, No. 25-Customs, dated the 2nd February 1963, No. 80-Customs, dated the 1st March, 1963, No. 131-Customs, dated the 20th August, 1965 and No. 105-Customs, dated the 6th June, 1966, articles and parts thereof adapted for use as parts and accessories of Motor Vehicles, other than motor cycles and motor scooters, falling under Item No. 75(12), if of the United Kingdom manufacture, are exempt from the payment of so much of that portion of the Customs duty leviable thereon which is specified in the First Schedule to the Indian Tariff Act, 1934, as is in excess of 42½ per cent <i>ad valorem</i> :</p> <p>Provided that the said articles are not also adapted for use as parts and accessories of motor cars including taxi cabs.</p>

Item No.	Notes
75(12) and (1) The following is a GATT Item :	
& 75(12A)	Articles (other than rubber tyres and parts and tubes) adapted for use as parts and accessories of motor cars including taxi cabs, provided that where any articles referred to in Item No. 75(12) are also ordinarily used otherwise than parts and accessories of motor vehicles they shall be dutiable at the rates of duty specified for such articles.
75(14)	Articles (other than rubber tyres and parts and tubes) adapted for use as parts and accessories of motor cars including taxi cabs are GATT Items.

26.1. In the case of tariff protection inquiries the Commission collects data with regard to the actual or estimated c.i.f. prices and landed costs for the same or

26. CIF Prices comparable commodities. These are compared **& Landed costs** with estimates of fair ex-works prices and the quantum of disadvantage, if any, to the indigenous industry is determined. On the basis of the quantum so determined protective rates of duty are suggested. These protective rates if adopted by Government are given effect to by the Tariff Amendment Act. Where an inquiry is made into an industry for the first time on the basis of a reference made by the Government to the Commission under the provisions of Section 11(a) of the Tariff Commission Act, to determine whether or not protection for the industry is desirable the same method is adopted. Modification in the protective rates of duty necessitated under the provision of Section 4(1) of the Indian Tariff Act, is made after an inquiry. The present inquiry is not an initial inquiry, but is in the nature of a review under the provisions of Section 11(e) read with Section 13 of the Tariff Commission Act as stated in Paragraph 2.1.

26.2. Some of the principal forms of protection available against unequal competition from foreign countries are protective rates of duties, subsidies and quantitative restrictions on imports. In the case of automobile industry which is covered by item Nos. 75, 75(1) and 75(3) subsidies as well as protective rates of duty were ruled out at the very first inquiry and the same approach was maintained by the Commission and accepted by Government on the occasion of the

second inquiry. The protection that was granted to the indigenous industry has been through quantitative restrictions on imports, and development assistance was provided through liberalisation of foreign exchange needed for easy availability of raw material, intermediate products and plant and machinery. It is therefore not necessary to go into the examination of the c.i.f. prices and landed costs of automobiles or to make a comparison of these c.i.f. prices and landed costs with the fair ex-works prices of the indigenous product with a view to determination of the quantum of disadvantage. As regards products classed under I.C.T. items Nos. 75(9), 75(11), 75(12) and 75(14) protective rates of duty apply and protection has also been granted through quantitative restrictions on imports. These issues have therefore to be examined only in respect of the products covered by these items.

26.3. As has been mentioned already in Paragraph 2.3 there are a total of 88 specified items of automobile components and sub-assemblies which are protected under items 75(9), 75(10) and certain other residual items under 75(12) and 75(14) and the protection of which expires on 31st December 1968. In so far as the c.i.f. prices and landed costs of these items are concerned we are confronted with difficulties in obtaining import prices for comparable products. We have, however, collected data in respect of such of the items for which information was available from the indigenous manufacturers and some of them are set out in Paragraph 28.

27.1. It has already been mentioned in Paragraph 25 that items Nos. 75, 75(1) and 75(3) are liable to revenue rates of duty only. We do not propose therefore to make any

27. Estimates of comparison of the fair ex-works price of auto-fair ex-works mobiles with landed costs of similar products. prices: Protection to the automobile industry insofar as items Nos. 75, 75(1) and 75(3) are concerned was granted not by the imposition of protective rates of duty but in other ways including the quantitative restrictions on imports. The question therefore of modification in accordance with the provisions of Section 11(b) of the Tariff Commission Act of the rates of duty does not arise. In view of the fact that

the industry has remained under protection through restriction of imports and other measures for about 15 years now we do not consider it advisable to open the question of substitution of protective rates of duty in place of revenue rates.

27.2. As regards the products included under item No. 75(9), 75(10), 75(11), 75(12) and 75(14) cost examinations have been conducted by our Cost Accounts Officers both in respect of the producers of automobiles as well as for automobile ancillary manufacturers in the case of certain selected items. Of the items included under the above, cost examinations have been conducted for 28 items for a total number of 18 units for the purpose of the price inquiry into the automobile ancillary industry, which make a major contribution to the price of automobiles. The details of these are given below :

I.C.T. item No.	Component or assembly	Names of Manufacturers whose accounts have been examined
1	2	3
75(10)	Clutch Assembly	Automobile Products of India Ltd., Turner Hoare Co.
	Radiator	Teksons Pvt. Ltd., India Ra- diators Ltd., Bharat Radiators Pvt. Ltd. Hindustan Motors Ltd.
	Propeller shaft	Ex-Cell-O (India) Ltd., Premier Automobiles Ltd. TELCO.
	Indicator Lamp	International Instruments Pvt. Ltd.
	Castings of all types [Also 75(12)]	Ennore Foundry Ltd. Aluminium Manufacturing Co. Ltd. (and all automobile manufac- turers).

1	2	3
75(11)	Glass items . . .	Hindustan Safety Glass.
	Multi-cylinder pumps .	Motor Industries Co Ltd.
	Speedometers . . .	International Instruments Pvt. Ltd.
	Air Pressure Gauges .	International Instruments Pvt. Ltd.
	Vacuum gauges . . .	International Instruments Pvt. Ltd.
	Ampere Meters . . .	International Instruments Pvt. Ltd.
	Electrical switches .	International Instruments Pvt. Ltd.
	Fuel gauges . . .	International Instruments Pvt. Ltd.
	Temperature gauges .	International Instruments Pvt. Ltd.
	Distributors . . .	Globe Auto Electricals Ltd. Lucas TVS Ltd.
	Filters . . .	Motor Industries Co. Ltd.,
	Wiper motor . . .	Globe Auto Electricals Ltd. Lucas TVS Ltd.
	Starter motor . . .	Globe Auto Electricals Ltd. Lucas TVS Ltd.
	Generator and Alternator . . .	Globe Auto Electricals Ltd.
	Voltage regulators . .	Lucas TVS Ltd.
	Ignition coils Oil Pumps .	Globe Auto Electricals Ltd. Indequip Engineering Ltd. TELCO.
75(11)	Head Lamp . . .	Lucas TVS Ltd.

1	2	3
75(12)	Brake Assembly	Automobile Products of India Ltd. Brakes India Ltd.
	Wheels	Wheels India Ltd. Sankey Wheels Ltd.
	Servo Mechanism	Sundaram Clayton Ltd.
	Control Cables	International Instruments Pvt. Ltd.

27.3. In addition to these, all the automobile manufacturing units have been costed and it is possible to isolate the separate components and sub-assemblies mentioned in the I.C.T. schedule and indicate the ex-works costs for the same, but details are given below only for a few items for which c.i.f. prices were available. None of the items mentioned under I.C.T. Item No. 75(9) or 75(14) is included in the above list. These items comprise assemblies and sub-assemblies as follows:—

Assembly	Item No.	Sl. No.	Sub-assembly or component
1	2	3	4
Engine & Transmission	75(9)	1	Rubber mountings.
	75(9)	2	Hose-pipes.
	75(9)	3	Fan belt.
Fuel	75(9)	4	Fuel pump diaphragms
Exhaust	75(9)	5	Exhaust pipes.
	75(9)	6	Muffler.
	75(9)	7	Tail pipes

1	2	3	4
Body & upholstery . . .	75(9)	8	Carpets.
	75(9)	9	Cushion springs.
	75(9)	10	Door and window fittings excluding glass.
Body and upholstery . . .	75(9)	11	Trim material.
	75(9)	12	Bus bodies.
	75(9)	13	Station wagon bodies.
	75(9)	14	Truck bodies.
	75(9)	15	Pick up bodies.
	75(9)	16	Parcel van bodies.
	75(9)	17	Steel cabs for lorries.
Body	75(14)	18	Body panels etc. etc.
Miscellaneous	75(9)	19	Rubber components not otherwise specified.
		20	Horns not otherwise specified.
		21	Gasket all sorts.

Item Nos. 1,2,3,4,8,9,10,11,19,20 and 21 are generally purchased by vehicle manufacturers from ancillary manufacturers. Of these items 8, 9 and 11 are also non-specific as these are used for other furnishing and upholstery purposes too. Item 5,6,7 in some and Nos. 12 to 18 in all cases are manufactured by the respective automobile manufacturers, and the relevant costs of each of these items namely, exhaust system and the body can also be isolated but since there are no imports of these parts and the degree of disadvantage to the indigenous industry cannot be determined the particulars for these items are not being given.

27.4. As a result of the cost examinations we have arrived at the estimates of fair ex-works prices of these products for different manufacturers (for which c.i.f. prices are available) and these are set out below in table 50.

TABLE 50

Estimated ex-works Prices of components.

Sl. No.	Name of the product (Items and specifications)	(Cost per unit)				
		Material cost (Rs.)	Conversion charges (Rs.)	Estimated ex-works cost (Rs.)	Return (Rs.)	Estimated fair ex-works price (Rs.)
1	2	3	4	5	6	7
1 Propeller shafts						
	Ambassador	71.48	37.14	108.62	9.09	117.71
	Bedford J4L—FR	171.01	55.23	226.24	16.22	242.46
	Bedford J4L—RR	245.11	70.86	315.97	21.84	337.81
	Bedford J4E—RR	297.28	76.82	374.10	25.01	399.11
	Bedford J4S—FR	147.36	46.45	193.81	13.73	207.54
	Bedford J4S—RR	236.46	69.97	306.43	21.32	327.75
	Leyland 176" W. B. F. R.	185.41	67.74	253.15	18.91	272.06

1	2	3	4	5	6	7
	Leyland 176" and 163" W. B. R. R.	251.76	73.77	325.53	22.61	348.14
	Leyland 163" W. B. F. R. . .	177.30	64.61	241.91	18.05	259.96
	Leyland 118" W. B. R. R. . .	250.31	68.58	318.89	21.76	340.65
	Leyland 210" W. B. F. R. . .	271.72	75.18	346.90	23.77	370.67
	Leyland 210" W. B. R. R. . .	298.64	78.52	377.16	25.42	402.58
	Jeep FR	58.48	36.02	94.50	8.32	102.82
	Jeep RR	68.11	37.65	105.76	8.93	114.69
	Jeep FC—150 FR	58.98	36.25	95.23	8.36	103.59
	Standard Herald	73.09	26.90	99.99	7.40	107.39
	Jeep FC—150 RR	57.20	36.52	93.72	8.28	102.00
2	<i>Oil Lubricating Rotor Pump</i>					
	Perkins	6.28	24.93	31.21	7.12	38.33

3 *Starter Motor*

MCH/6215 Willys Jeep . . .	206.40	25.08	231.48	20.02	251.50
MDU/6012 Willys Jeep . . .	125.54	43.22	168.76	20.76	189.52
MDU/7013 Dodge P.W.D.—300 Kew with Petrol Engine . . .	131.17	43.85	175.02	21.60	196.62

4 *Ignition Distributor*

S—86 B.—Fiat . . .	34.13	20.16	54.29	7.03	61.32
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Ignition Switch

Q—166A Fiat and Willys Jeep . . .	9.83	0.98	10.81	0.90	11.71
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Voltage Regulator

I.R.—19D . . .	22.48	8.57	31.05	3.27	34.32
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Ignition Coils

BE—200B Fiat . . .	16.52	3.84	20.36	1.58	21.94
BE—200BH, Ambassador . . .	17.94	3.91	21.85	1.69	23.54
BZ—200A Dodge . . .	19.65	3.89	23.54	1.82	25.36
Power wagon D—300 Kew . . .	..	..	..	..	..

27.5. Since we have discussed at length the manner in which the costs were arrived at and the various factors relevant to those, in the price reports on automobiles and auto-ancillaries we are not going into the same details here.

28.1. The following table 51 shows the landed cost without duty of imported components and sub-assemblies with the comparative fair ex-works prices as given in the table 50 above. As has been mentioned already there are a number of limitations on these comparisons owing to the fact that isolation of identical products has not been easy. An effort has however been made to compare, as far as possible the same or similar products.

28. Comparison
of the fair Ex
works prices
of the indige-
nous products
with c. i. f.
prices



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TABLE 51
*Comparison of landed cost without duty of imported components & sub-assemblies with
 estimated fair ex-works price of components*

Particulars of components or assembly	I.C.T. Item No.	Vehicles for which used		Estimated Fair ex-works price Rs.	Calculated C.I.F. price (F.O.B. price + 10%) Rs.	F.O.B. price Rs.	Landed cost excluding duty (c.i.f. + 2% clearing charges) Rs.	Difference between estimated ex-works price and landed cost with duty (Col. 5—col. 8) Rs.	Difference as percentage of C.I.F. (Col. 6) %
		In the case of indigenous product	In the case of imported item						
1	2	3	4	5	6	7	8	9	10
1. Propeller Shafts	75(10)	Ambassador Car	Ambassador Car	117.71	34.90	31.73	35.60	82.11	235.27
Ambassador Car J 4 L—FR		Bedford	*For Bedford & Leyland trucks	242.46	102.96	93.60*	105.02	137.44	133.49
J 4 L—R R		Do.	Do.	337.81	102.96		105.02	232.79	226.10



1	2	3	4	5	6	7	8	9	10
J 4 E-R R	• 75(10)	Bedford	*For Bedford & Leyland trucks	399-11	102-96	93-60*	105-02	294-09	285-63
J 4 S-F R	•	Do.	Do.	207-54	102-96		105-02	102-52	99-57
J 4 S-R R	•	Do.	Do.	327-75	102-96		105-02	222-73	216-33
176" W.B. FR	•	Leyland	Do.	272-06	102-96		105-02	167-04	162-24
176" and 163" W.B. RR	•	Do.	Do.	348-14	102-96		105-02	243-12	236-13
163" W.B. FR	•	Do.	Do.	259-96	102-96		105-02	154-94	150-48
118" W.B. RR	•	Do.	Do.	340-65	102-96		105-02	235-63	228-86
210" W.B. FR	•	Do.	Do.	370-67	102-96		105-02	265-65	258-01
210" W.B. RR	•	Do.	Do.	402-58	102-96		105-02	297-50	289-01
F R	•	Jeep	**Willys (J-3B Jeep)	102-82	51-98	47-25**	53-02	49-80	95-81
R R	•	Do.	Do.	114-69	51-98		53-02	61-67	118-64
FC-150 FR	•	Jeep type	Do.	103-59	51-98		53-02	50-57	97-29
FC-150 RR	•	Do.	Do.	102-00	51-98		53-02	48-98	94-23
Standard Herald	•	Standard He- rald	Standard Herald	107-39	34-90	31-73	35-60	71-79	205-70

(These F.O.
B. prices are
for replace-
ment parts)

2. Oil Pumps	75(11)	Perkins (Oil lubricating rotor pump)	Perkins (Oil pump)	38-33	52-50	53-55 (—) 15-22 (—) 28-99
3. Starter Motor	75(11)	Willy's-Jeep	Willy's-Jeep	251-50	140-31	143-12 108-38 77-24
MCH/6215		Do.	Do.	189-52	140-31	127-55@ 143-12 46-40 33-07
MDU/6018		Dodge power wagon D-300	Dodge power wagon D-300	196-62	140-31	143-12 53-50 38-13
MDU/7013		Kew with Petrol engine				
4. Distributor	75(11)	Fiat 1100	Fiat	61-32	42-57	38-70@ 43-42 17-90 42-05
Ignition distributor S-86-B						
5. Switches	75(11)	Fiat and Willy's Jeep	Fiat and Willy's Jeep	11-71	7-37	6-70@ 7-52 4-19 56-85
Ignition Switch Q-166 A						
6. Voltage and current regulators IR-19D	75(11)	N.A.	For all vehicles	34-32	31-90	29-00@ 32-54 1-78 5-58
7. Ignition Coils	75(11)	Ambassador	Ambassador	23-54	13-75	14-03 9-51 69-16
BE-200 BH						
BE-200 B		Fiat	Fiat	21-94	13-75	12-50@ 14-03 7-91 57-53
BZ-200 A		Dodge power wagon D-300 kew.	Dodge power wagon D-300 kew.	25-36	15-51	14-10@ 15-82 9-54 61-51

@Post-Devaluation prices.

NOTE.—F. O. B. prices have been taken from the replies received from the producers and they have been converted c. i. f. prices by adding 10 per cent.

28.2. It would be observed that in the case of ICT item No. 75(10) the range of disadvantage to the indigenous industry is from 94 to 289 per cent, while as regards ICT item No. 75(11) it is from 6 to 77 per cent.

29.1. In the Commission's report of 1953 protection was strongly advocated for the industry. The ²⁹Measure of grant of subsidy to the industry was not favoured because it was difficult not only to determine its quantum but also to anticipate the period for which it could be required. As regards protective rates of duty, the Commission considered the question of their imposition but felt that any increase in duty would result in increase in price of indigenously assembled cars, which had to depend heavily on imported components. It apprehended a set-back in demand owing to rise in prices of passenger cars as well as of commercial vehicles. It was of the view that the remedy appeared instead to lie in the reduction of these high rates of duty. The imposition of a protective duty was thus ruled out and the measure suggested was continuance of import restrictions in a more intensive form, increase in the import quota of manufacturers requirements by giving weightage according to the progress made by them in the manufacture of components, or in other words, the judicious allocation of more liberal foreign exchange. While the Government agreed with the recommendation in respect of the lowering of import duties, their resolution did not specifically mention Government's decision on the issue of protection, and even though as a result of the recommendation of the Commission the rates of duty were reduced in the case of automobile ancillaries as indicated below, these were not converted into protective.

TABLE 52

Rates of duty and modification made in 1953

Item No.	Rate of duty before modification		As modified under Ministry of Commerce & Industry Notification No. 21(1)-T. B./52 and Ministry of Finance No. 41 dated 31st May 1953
	Standard	Preferential revenue	
			Standard Preferential revenue
75(9)	63	59-17/20	50 47
75(10)	94½	91-7/20	50 47
75(11)	..	.. Body panels	40 37
75(11)	31½	28-7/20 Other than body panels.	25 22
75(12)	31½	28-7/20	25 22

In its report of 1953 the Commission did not even mention the revenue rates of duty for completely assembled automobiles and no recommendation in respect of any modification to the rates of duty relating to the assembled automobiles was made.

29.2. Between 1953 and 1956 the Commission undertook inquiries into 5 items of automobile ancillary industries covered by I.C.T. item Nos. 75(12A), 75(15), 75(16), 75(17) and 75(18). These were piston assembly, 75(12A), which was recommended for protection in 1955 and the protection of which lasted upto the end of 1966; automobile leaf springs

75(15) were recommended for protection in 1954 and protection lasted upto 1960; automobile sparking plugs 75(16) were recommended for protection in 1954 and the protection lasted upto 1966; automobile hand tyre inflators 75(17) were granted protection in 1954 and this lasted upto 1961; nozzles and nozzle holders for stationary as well as automobile diesel engines 75(18) (b) were granted protection in 1955 and this protection lasted upto 1964. Thus at the time of the second Tariff Commission inquiry in 1956 item Nos. 75(12A), 75(15), 75(16), 75(17) and 75(18) were already subject to protective rates of duty and separate inquiries had been conducted in respect of them. Revenue rates of duty were applicable at the time of the 1956 report in respect of item Nos. 75(9), 75(10), 75(11), 75(12) and 75(14). The Commission recommended protection to the industry for a period of ten years subject to the review of protective rates of duty at suitable intervals. The Commission also recommended that the import control in respect of automobiles should be so administered that the volume of imports allowed to the different manufacturers was in fair relation to their manufacturing programmes. A combination of protective duties and import control was thus recommended and also the conversion of the revenue duties into protective. Government agreed in principle with the recommendation of the Commission in regard to protection being granted to the industry through protective duties as well as by control on imports, but did not agree to the modification of rates to the extent advocated by the Commission. The position of the relative I.C.T. items, the rates of duty applicable at the time of the report, and at the time of the introduction of the bill for converting them into protective, as well as for the modification of the rates and the new rates as modified after passing of the Tariff Amendment Act of 1957 are given in table 53 below.

TABLE 53

Rates of duty on automobiles and components at the time of Commission's last Report (1956), rates recommended by the Commission and those adopted by Government

I.C.T. Item No.	Nature of duty in 1956	Rates of duty as given in 1956 Report of the Commission (Effective Standard rate)	Rates of duty recommended by the Tariff Commission in its 1956 Report (Standard rate)	Nature of duty recommended	Rates of duty at the time of introduction of Indian Tariff (Amendment) Bill, 1957 (Effective standard rate)	Nature of duty adopted	Rates of duty as adopted after passing of the Indian Tariff (Amendment) Act, 1957 (Effective Standard rate)
1	2	3	4	5	6	7	8
75	Revenue	31½ per cent <i>ad valorem</i>	No recommendation	..	35 per cent <i>ad valorem</i>	..	35 per cent <i>ad valorem</i>
75(1)	Revenue	75 per cent <i>ad valorem</i> or Rs. 6,000 per car or cab which ever is higher	Do.	..	75 per cent <i>ad valorem</i> or Rs. 6,000 per car or cab which ever is higher	..	75 per cent <i>ad valorem</i> or Rs. 6,000 per car or cab which ever is higher
75(3)	Preferential revenue	31½ per cent <i>ad valorem</i>	Do.	..	32½ per cent <i>ad valorem</i>	..	32½ per cent <i>ad valorem</i>
75(9)	Revenue	50 per cent <i>ad valorem</i>	Do.	..	50 per cent <i>ad valorem</i>	Protective	50 per cent <i>ad valorem</i>

1	2	3	4	5	6	7	8
75(10)	Revenue	50 per cent <i>ad valorem</i>	The Commission recommended splitting up of item No. 75(10) into 75(10) and 75(10A). For items under 75(10) it recommended 25 per cent and for items under 75(10A) it recommended 75 per cent <i>ad valorem</i> .	Protective	50 per cent <i>ad valorem</i>	Protective	50 per cent <i>ad valorem</i>
75(11)	Revenue	25 per cent <i>ad valorem</i>	10 per cent <i>ad valorem</i>	Protective	25 per cent <i>ad valorem</i>	Protective	25 per cent <i>ad valorem</i>
75(12)	Revenue	25 per cent <i>ad valorem</i>	10 per cent <i>ad valorem</i>	Protective	25 per cent <i>ad valorem</i>	Protective	25 per cent <i>ad valorem</i>
75(12A)	Protective	50 per cent <i>ad valorem</i>	No recommendation	..	50 per cent <i>ad valorem</i>	..	50 per cent <i>ad valorem</i>
75(14)	Revenue	40 per cent <i>ad valorem</i>	10 per cent <i>ad valorem</i>	Protective	40 per cent <i>ad valorem</i>	Protective	40 per cent <i>ad valorem</i>
75(15)	Protective	50 per cent <i>ad valorem</i>	No recommendation	..	50 per cent <i>ad valorem</i>	..	50 per cent <i>ad valorem</i>
75(16)	Protective	92½ per cent <i>ad valorem</i>	Do.	..	92½ per cent <i>ad valorem</i>	..	92½ per cent <i>ad valorem</i>
75(17)	Protective	45 per cent <i>ad valorem</i>	Do.	..	45 per cent <i>ad valorem</i>	..	45 per cent <i>ad valorem</i>
75(18)	Protective	60 per cent <i>ad valorem</i>	Do.	..	60 per cent <i>ad valorem</i>	..	60 per cent <i>ad valorem</i>

29.3. It may also be mentioned that the Commission had recommended the break up of ICT item No. 75(10) and 75(11) and addition of another item 75(10) (A) by transferring from 75(10) of sub-items Nos. 75(10)(i), 75(10)(iii) and short members of chassis frames from sub-item No. 75(10)(iv) and from 75(11)(iv) long members of chassis frames. Government did not, however, accept the recommendation for the introduction of a new item and the same items remained. Though the Commission had not recommended the protection of item No. 75(9) it agreed as a result of subsequent correspondence to the inclusion of this item also in the protected list. The final position thus was that in the year 1957 and subsequently up to 1960, I.C.T. items 75(9), 75(10), 75(11), 75(12A), 75(14), 75(15) and 75(16) were under protection. As a result of deprotection of items No. 75(12A), 75(15), 75(16), 75(17) and 75(18), only items No. 75(9), 75(10), 75(11), 75(12) and 75(14) were on the protected list at the time of the present inquiry.

29.4. In the final analysis the position is that the main automobile industry including the manufacture of complete automobiles is protected only through quantitative restrictions on imports and the continuance of protection to it has to be considered only in respect of these restrictions since no protective rates of duty apply to it. As regards components and sub-assemblies detailed under item Nos. 75(9), 75(10), 75(11), 75(12) and 75(14) the industries which are producing them are the automobile manufacturers as well as automobile ancillary manufacturers and protection is available to both through import restrictions as well as protective rates of duty.

29.5. On the question of continuance of protection to the industry, views were invited from the various interests. Hindustan Motors has stated that in the present stage of development the automobile industry has not yet achieved such a state when protection could be withdrawn and that it should be continued until the industry is strong enough, that it needs the guidance and protection against highly developed countries like U.S.A., U.K., countries of the European Continent and Japan. The present cost of production in the country being higher than that of the overseas manufacturers

protection—in the view of this unit—should be continued. Premier Automobiles has made the point that in the context of our established planning policies there is no justification for allowing a few individuals to import foreign cars even on payment of inconceivably high duties, when such expenditure must involve scarce foreign exchange and when the country is already manufacturing three types of cars. The unit has strongly advocated protection in the form of import prohibition until such time as the domestic producer is near par with the foreign manufacturer in cost of production and technical flexibility. Ashok Leyland has stated that the automobile manufacturer in the present controlled economy is not a free entrepreneur, the taxes indirect and direct as levied by the Central and State Governments inflate the prices of automobiles produced in India necessitating protection in the domestic market with protective tariffs from competition from outsiders and has emphasised that the period of protection should be related to the period of the operation of various controls and taxes by Government. Mahindra & Mahindra considers that while the automobile industry has made notable progress in achieving the targets set for it, it is at a considerable disadvantage when compared with similar industries in foreign countries. Limited volumes permitted for manufacture, control on the choice and availability of equipment and materials, restrictions on the raising of capital and controls over prices and distribution, operate as disadvantages with which the industry is faced. These according to this unit prevent the industry from diverting resources to research and improvement and providing the customer with diversity of models. Protection is therefore needed for the industry and the quantum should be such as to make unattractive the import of finished vehicles and parts from the countries where the industry enjoys advantages which the automobile industry in this country does not. Simpson and Co. has stated that in the present circumstances the automobile industry should get protection for a further period of ten years. TELCO has advocated discontinuance of protection subject to certain far-reaching safeguards such as equalisation of duties and taxes on imported complete vehicles with the burden of taxes and duties both direct and indirect levied in this country and disallowance of import at prices lower than those at which vehicles are sold or traded

in the international market. Bajaj-Tempo has expressed a view almost in line with that of TELCO and states that if the tax element is eliminated from the price structure of commercial vehicles the industry can stand on its own.

29.6. Dealers have generally advocated the continuance of protection. It has been argued that the industry has justified protection by its expansion and growth in the last ten years; if greater justification is necessary the two attacks on our frontiers by China and Pakistan have shown the vital need of motorised transport for the defence of our country, and we cannot depend on external help for this. Both on economic and political grounds and also in the larger national interest some dealers consider the continuance of protection to be necessary. One or two other dealers have, however, stated that the industry has come to a stage where it ought to stand on its own legs and compete freely both in improvement of models and reduction in prices. The Federation of Automobile Dealers Association has strongly advocated continuance of protection.

29.7. As many as 33 fleet-owners have answered the question on the continuance of protection. Some of them have stated that till the supply of vehicles and its spares is in abundance and these are freely available, protection should continue and that the automobile industry has survived only because of the protection granted by the Government and that on economic as well as fiscal ground, protection to the automobile industry should continue. It is maintained that protection is necessary for availability of cheap, durable trucks for industrial and commercial development of the country. On the other hand, some of the fleet-owners have highlighted the issues which are of special relevance to the question of protection. They have pointed out that as a result of protection the element of competition has been removed to a large extent, the manufacturers have been enjoying a sellers' market, adequate maintenance spares are not supplied by the vehicle manufacturers, the annual target of production is for reasons not clearly explained, not being maintained. According to them there has been no lack of import facilities for machinery, tools and raw materials, but bad material has been used. The absence of competition has been instrumental in their view in the rise of prices and

if import of vehicles is allowed it may help to develop the transport industry and also provide an element of competition and encourage the introduction of improvements in production techniques. One of the fleet-owners has observed that protection should have been conditional on the manufacturers providing the necessary equipment to State Transport Undertakings. It has also been argued that the supply of spare parts should be made easy, that the prices of vehicles should be reduced, the tax incidence on the prices of vehicles lessened and the quality of the automobiles improved.

29.8. The Indian Roads and Transport Development Association has advocated continuance of protection stating that it is necessary in the interest of healthy development of the country and also for saving of foreign exchange to which the vehicles manufacturing industry has to make a great contribution. The Federation of Indian Automobile Associations had advocated the attainment of 100 per cent self-sufficiency by manufacturers and has observed that protection by means of tariff wall would have only limited effect. The D.G.T.D. has expressed the view that the industry needs protection for a further period of ten years by which time it is hoped that the industry would acquire a self-generating status. The Director of Industries, Government of West Bengal has observed that in the prevailing circumstances tariff protection has no practical significance.

29.9. From the replies received on the subject it appears that the issue of protection in so far as the automobile industry is concerned is not adequately understood and that, by and large, most of the interests addressed have interpreted protection as protection through protective duties. It has already been explained earlier that the main automobile industry does not enjoy any protective rates of duties and that protection granted to it is through quantitative restrictions on imports. In the earlier years the industry was assisted by liberalisation of the availability of foreign exchange for the import of components, raw materials, machinery and implements as well as by reduction of duties on imported components. The automobile ancillary industry as well as the main automobile manufacturing industry to the extent that the latter manufactures certain components, has been

provided both tariff protection as well as protection through restriction on imports. The effective protection that is operative today in so far as the automobile and automobile ancillary industries are concerned is that of restriction of imports.

29.10. Protection to an indigenous industry can be granted in a number of ways which include protective rates of duties, quantitative restrictions on imports, pooling of imported as well as indigenous products, subsidies to the indigenous industry and other minor forms of assistance. Where restrictions on imports become extensive either as a result of the adoption of quotas for the purposes of protection, or for the regulation of the balance of payments position, protective tariffs, pooling and subsidies do not play any significant part in the development of the indigenous industry. For, these methods of protection come into operation only when substantial quantities of easy and unrestricted imports of the commodity are available. When every item or unit of the commodity is under quantitative control, other measures of protection become academic and mostly redundant. Since in our country protection has in the past been associated almost always with the imposition of protective rates of duty it has generally been considered that protection involves imposition of protective as distinct from revenue rates of duty.

29.11. Once protection has been granted to an industry the market mechanism which applies in conditions of free trade becomes inoperative and new factors having far-reaching economic and fiscal significance are immediately introduced. Where protection has been granted in the form of protective rates of duty the consumer prices of the commodity will tend to increase. Meticulous calculations are made for their determination so that the quantum may be commensurate with the minimum needs of the industry and the burden on consumers. The aim is that in course of time there should be a progressive decrease in this quantum and the indigenous industry should be able to sell its products at prices equivalent to the c.i.f. prices of competing manufacturers abroad. Protection whether through tariff barriers or otherwise results in severance of relationship between internal and international prices. This severance of connection between the price levels

of the home country and outside world is even more pronounced in the case of quantitative restrictions. For any regime of tariffs is likely to involve price fluctuations of a lesser magnitude than a similar adjustment in a regime of quantitative restrictions, depending upon conditions of demand and supply.

29.12. Where protection is granted to an industry, periodical review of the industry is desirable, with a view to keeping a watch on the progress of the industry and for observing whether protection has any deleterious effects. Such a review is meant to ensure that the consumer interests are kept to the fore and to provide a climate for the real growth and development of the industry with a view to its attaining maturity and ability to withstand competition from abroad in a reasonable period of time. If such periodic reviews and searching inquiries into protected industries are not undertaken, there is a likelihood of retrograde influences such as a sheltered market making their ingress into the growth of the industry which will not be conducive to the healthy development of the protected industry. A policy of continued protection would also introduce dwarfism and other weaknesses in the industry which would suffer collapse if suddenly exposed to competition from abroad. The necessity for such investigation and review becomes even greater where extensive quantitative restrictions have been introduced either as a measure of protection or for other reasons resulting in protection to the industry. The primary purpose of the periodic reviews is to examine the working of protection with reference to the growth of the protected industry and to recommend suitable modifications in the scheme of protection, to suggest further measures of assistance and to give guidance to the industry. It is erroneous to suppose that the review that is periodically conducted by the Tariff Commission is only with a view to modifying rates of duty. De-protection should not in practice mean the replacement of tariff duties by quantitative or quota restrictions but relaxation of restrictions with regard to imports of similar commodities from abroad, liberal availability of foreign exchange for purchase of such imported goods in the country and the reduction of the rates of duty to a level which do not operate as a hindrance to imports where the revenue duties do not come in the way of consumer preference. On the other hand,

de-protection envisages a situation where the extent of import of the commodity is not at all affected by the rates of duty and further these rates do not in any way whatsoever provide unfair advantage to the local industry. Where such conditions are absent the industry is effectively protected whether the rates are called protective or not and it is necessary to keep a constant watch on the industry.

29.13. In almost all such cases where Government have "deprotected" industries in recent years quantitative restrictions on imports have continued and in addition to these the revenue rates of duty are in effect protective though not called by that name. The measure of protection therefore insofar as the fiscal consequences on the position of supply and demand within the country, the price levels, the development of the industry, and the repercussions on the balance of payments are concerned continue, even in the case of these industries in the same degree as in the past, if not in a larger degree. Protection in itself is not a formal declaration but a practical measure which operates under certain stated conditions. To remove the surveillance over the functioning of these industries merely because of the formal substitution of nomenclature relating to duties would not only be unrealistic but unfair to the consumer and also to the economic growth of the country. We are therefore of the view that where effective protection is maintained through quantitative restrictions on imports the necessity for periodical review is even greater than in the case of industries which are subject to protective rates of duty.

29.14. It would bear repetition that the automobile industry enjoys protection today, only through quantitative restrictions on imports; in fact the word "quantitative" can easily be substituted by "total". This protection has had both advantages as well as disadvantages. On the one hand, it has allowed the industry to develop to a certain extent and come up to its present position and on the other it has created an over-secure shelter for the industry resulting in the severance of world market connections, absence of fear of competition, disincentives for cost reduction, quality improvement, streamlining of production and managerial techniques and indifference to consumer's satisfaction. The position therefore is that if the flood-gates of imports were to be

opened today as should be if protection, is really removed, the industry may not be able to withstand foreign competition. It has therefore to remain under protection until such time as it can stand on its own legs. This industry has not yet matured although it has had its beginning nearly two decades ago. Its main handicaps are the fragmentation to which we have already referred, low volume of production and consequent high prices, the non-availability of raw materials even where indigenous sources are capable of supplying it, and extensive tie-up through collaboration agreements. There is no practical alternative but to let the industry continue under the present scheme of protection. Even if it could be argued that the industry was able to withstand competition from abroad, reasons of balance of payments would have necessitated the continuance of the present position as there is no danger of substantial imports being allowed in the foreseeable future.

29.15. In so far as the automobile ancillaries are concerned which come under item Nos. 75(9), 75(10), 75(11), 75(12) and 75(14) protective rates of duty are only in name since these make no contribution to the restriction of imports. Whatever restrictions on imports resulting in protection to the industry have come about are because of quantitative restrictions. We have gone into the quantum of protection needed but as we have already observed it is immaterial whether this or a higher quantum is fixed except in so far as these components are concerned which cannot be manufactured in the near future in the country. We suggest therefore that the components may be classified broadly as under :

- (i) Components both finished and semi-finished which are not likely to be produced in the country within the next five years.
- (ii) Components both finished and semi-finished which are partly being manufactured in the country and are partly being imported owing to inadequate production or non-availability of the requisite designs and specifications, or lack of volume of requirement.
- (iii) Components which are being manufactured in the country in the requisite quantities.

We are informed by the D.G.T.D. that capacity has been established practically for the entire range of automobile ancillaries but production of some of the items is not enough to meet the entire demand. Even for these items schemes are reported to have been approved which are in various stages of implementation. In the circumstances, the components in question will fall either in category (ii) or (iii). The automobile ancillary industry has recorded a remarkable expansion since the last inquiry and the contribution by the small scale sector to the production of certain ancillaries is also significant. However, in view of the fact that emphasis had to be laid on the main automobile industry, it has not been possible for us to make a detailed examination of the different aspects of the ancillary industry and its problems during the course of our present inquiry. The ancillary industry is an important adjunct of the main automobile industry and its development needs therefore to be carefully watched. Government have already licensed capacities for most of the ancillaries which are expected to materialise in the near future. We therefore propose to review the industry again after a period of two years. It is anomalous that while the main automobile industry does not enjoy protective rates of duty and complete automobiles are liable to revenue rates of duty, the automobile ancillary industry in the main and only some parts manufactured by the main automobile industry should be liable to protective rates of duty. We therefore recommend that the protective rates of duty on components may be withdrawn and revenue rates of duty imposed instead. The industry should, however, be regarded as protected as in the case of automobile industry in view of the quantitative restrictions on imports.

CHAPTER IX

OTHER ISSUES

30. In the Chapter on Selling Arrangements we had referred to the risk of accidents arising from want of timely supplies of replacements of tyres and other essential parts of automobile vehicles. With the accepted rate of expansion of the automobile industry it is necessary that driving conditions should be made safer by fitting in better steering controls for the driver and safety belts for both the driver and the passengers. The accidents however are caused not only by faulty parts and rash driving but also by the intensity of the traffic flow, inadequate parking facilities and badly laid roads. In Delhi, in particular the available statistics of accidents show a trebling of the number in ten years between 1957 and 1966 although the number of vehicles cannot be said to have increased in proportion. In Bombay, the other city for which similar data have been made available, there is a 30 per cent increase in the number of accidents in the same period. Data for Calcutta and other centres are not available.

31. There are other related problems, like prevention of air pollution through structural alterations of exhaust pipes in automobile vehicles. Proper standards should also be laid down for checking the emission of gaseous fumes. Air pollution has not yet reached the same dangerous levels in India as in other countries, but in the leading cities of Bombay and Calcutta with their worsening congestion, it is fast approaching the limit. Strictly speaking, these aspects may be beyond the purview of our inquiry but we would like to point out that the social costs which they involve should not be forgotten in the context of the development of the automobile industry as a whole.

initial push. It recommended that firms with a phased programme for the progressive manufacture of complete vehicles should alone be allowed to continue in the field and the firms which had purely assembling programme be closed down in due course. The second report of Tariff Commission in 1956 recommended protection for a period of 10 years and laid down a planned programme of manufacture.

3. The period since the second inquiry coincides with the Second and the Third Five Year Plan periods which not only witnessed great industrial development but has also laid the foundations of an industrial society in this country. The automobile industry is undoubtedly an important and strategic industry. The development of such an industry therefore during this crucial period demands a critical appraisal in the social context—an appraisal that would pin-point the weaknesses and help us lay down broadly and clearly, the guidelines for its rapid and healthy growth in the future.

4. The first fact that strikes us is the commencement of the manufacturing operations as against pure assembly and the impressive growth of the ancillary industry in the country, particularly in the last three years or so. The progress, however, does not seem to be on the right lines; nor can it be described as quite satisfactory. As a matter of fact, the ancillary industry came into existence mainly in response to the replacement demand particularly for the fast moving components rather than to the demand for original equipment. Due to historical reasons automobile manufacturers in India took upon themselves the manufacture of components and parts also, to carry out the manufacturing programme. There was no ancillary industry in the early period. Even after the ancillary industry sprang up and developed, the original tendency towards vertical integration has not slowed down appreciably. It may be pointed out, however, that on account of the deliberate policy of the Government to encourage ancillary manufacturers by curtailing licences issued to the automobile manufacturers for ancillaries and the consequent compulsion to buy from the ancillary producers that some horizontal development has taken place. The demarcation of the items to be exclusively manufactured by ancillary industries in March 1965 with a view to prevent vertical integration and facilitate horizontal dispersion of ancillary industries

has helped to some extent the development of ancillary industry. Yet according to the All India Automobile and Ancillary Industries Association, the boughtout components as original equipment from indigenous ancillary industry are about 20 to 25 per cent of the ex-factory price of vehicles assembled in the country as against 60 to 70 per cent in other advanced countries. It must, however, be noted that self-manufactured components by automobile units from 1961-62 to 1965-66 by value have increased rather than decreased as can be seen from the following table:

TABLE 1

Percentage (by value) of components produced in their own factory by different automobile manufacturers in 1961-62 and 1965-66

	1961-62	1965-66
Ambassador	53.39	58.63
Fiat	27.00	39.00
Standard	26.05	42.85
Telco	61.10	64.90
Ashok Leyland	2.18	5.91

(For details, see Table 21, *Supra*, page 140)

Thus, most of the development of the ancillary industry can be ascribed to reduction in imports rather than to the decrease in vertical integration. The proportion of self-manufactured components has increased further in 1966-67 so far as the production of passenger cars is concerned (Ambassador 62.13%, Fiat 51.23% and Standard 49.57%). This is not a healthy feature particularly in an under-developed country like ours with a low volume of production and demand. It has inevitably resulted in a high but avoidable degree of under-utilisation of capacity, considerable over-lapping within the vehicle manufacturers and ancillaries and wasteful duplication

of capital equipment. This has meant waste of foreign exchange and led to higher cost of production. It may be pointed out that the Tariff Commission in its first report had recommended that "the manufacturing firms especially those who have not yet made any appreciable progress in implementing their programmes of manufacture should try to utilise as far as possible any surplus capacity available with the other manufacturing firms". The Jha Committee had suggested that expenditure on the installation of presses, gear cutting machines, foundry equipment and many other similar items could be substantially reduced by developing common facilities to be shared by more than one producer. It had further observed: "The Indian automobile industry does not seem to be willing to develop cooperative venture of this kind, each unit being anxious to produce what it can on its own rather than join hands with others in the field." The expert team of the U.S. automotive industry in their Survey of Indian Automobile and Ancillary Industry (1961) at the instance of International Cooperative Administration had also noted the tendency of all to want to do everything within their own plants and regarded it as "an inherent characteristic of the Indian industrialist" and given illustrations of only the large duplications which were obvious to them during their short visit to the different plants. An example given by them may be cited. They had seen "side frame presses that if used for side frames only, any one of which could furnish side frames for the entire automotive industry at the end of the Third Five Year Plan." They were given to understand that other vehicle manufacturers could not get their side frames made on these presses even though they furnished their own dies. In contrast to this, they pointed out that in the U.S.A. even the largest producer of automobiles (Chevrolet) bought more than one-half of their frames from independent frame plant and most other General Motors frames were purchased. They also noted that the small ancillary plants had their own foundries and forge shops. The situation since then does not seem to have improved. Thus, the Indian automobile industry has been unfortunately dominated by individualistic spirit with a wasteful tendency for each unit to make as much as possible within its own plant. This aspect of the industry is in sharp contrast with that in other countries where full use is made of the independent and specialised manufacturers of ancillaries.

The main economies from vertical integration are available if and when the volume of automobile production is high. Even then some of the larger manufacturers in Western countries buy a sizeable amount of their requirements of components and parts from independent specialised manufacturers. This ensures full utilisation of the expensive equipment by the independent manufacturers and brings about reduction of their cost per unit. In India, however, the volume of production in each of the automobile unit is too small to benefit it from economies of vertical integration.

5. The second important fact about the automobile industry is the fragmentation of the small volume of production by the issue of licences to a number of producers in the automobile industry and the ancillary industry, e.g. there are seven vehicle manufacturers, TELCO, Hindustan, Premier, Ashok-Leyland, Standard, Mahindra & Mahindra and Bajaj, even though the entire requirements of automobiles can be produced by one efficient unit. In addition, the defence department has also started production of trucks and jeeps. Vehicle-wise, there are three producers for passenger cars; two for jeeps; five for light trucks; four for medium trucks. Only in the case of heavy trucks, there is one manufacturer. Moreover, there is geographical dispersion with seven centres of production—two in Bombay; two in Madras; one in Calcutta; one in Jamshedpur; one in Poona and one under the defence department. In the case of two units in Bombay, their operations are dispersed in three different factories. Even in the case of most of the ancillaries there are more than one producer; in some cases the number goes to even six to nine. The main idea underlying the licensing of a number of units was the fear of monopoly and the consequent need to provide healthy competition. But unfortunately, this has not resulted in any effective competition bringing about a reduction in the price and/or improvement in the quality. We have had to pay a high price for this so-called competition; for the prices have been continuously rising, and quality, especially of passenger cars, has definitely been neglected. This fragmentation of production, which can be seen from the two tables given on the next page showing percentage share of each manufacturer in the production of commercial vehicles and

passenger cars, has been the main cause of high costs of production and loss of economies of scale which is the special characteristic of the automobile industry.

TABLE 2
Percentage share of manufacturers in production of commercial vehicles

Commercial Vehicles	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
1	2	3	4	5	6	7	8	9	10	11
1. Hindustan .	7.1	9.8	22.4	27.2	16.5	18.9	20.6	14.8	13.1	12.0
2. Premier .	37.2	28.7	27.6	24.4	22.3	20.6	22.4	26.1	24.5	14.1
3. Standard .	..	..	..	..	..	..	..	..	0.2	2.9
4. Ashok .	5.4	7.4	7.1	7.7	9.5	10.8	9.7	11.1	11.4	11.3
5. Telco .	50.3	52.7	40.2	37.1	48.5	46.5	44.1	42.9	46.3	55.2
6. Bajaj .	..	1.4	2.7	3.6	3.2	3.2	3.2	5.1	4.5	4.5
TOTAL .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 3
Percentage share of manufacturers in production of passenger cars

	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
1. Hindustan .	41.7	59.2	47.9	48.3	51.0	57.6	54.9	66.1	62.8	70.5
2. Premier .	39.9	22.7	37.2	34.1	33.3	26.8	23.9	16.7	22.9	25.5
3. Standard .	18.4	18.1	14.9	17.6	15.7	15.6	21.2	17.2	14.3	4.0
TOTAL .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

The existence of more or less a continuous sellers' market, the absence of any effective competition and price control are

the main factors responsible for the relative lack of cost consciousness and quality consciousness among some of the automobile manufacturers.

6. The difficulties of securing foreign exchange compelled increasing attention to indigenisation which was accelerated during the later part of the Third Plan period. The claim of automobile manufacturers to have reached over 90 per cent indigenous content calculated on the basis of the Jha formula does not give a correct picture; for most of the raw materials for automobile as well for ancillary manufacture are still imported; so are a number of parts and components. This is recognised by the industry as can be seen from the fact that at the meeting of the Development Council for Automobile and Allied Industries held on 29-11-1966 it was pointed out that "the present formula followed in computing the indigenous content of the vehicles manufactured did not give the true picture in that it did not take into account the foreign exchange spent on the manufacture of ancillary items and raw materials that are incorporated by the vehicle manufacturers" and "it was decided that the sub-committee on Automobile and Ancillary Industries may suggest a suitable formula which would give a correct picture of the foreign exchange consumed per vehicle." It is unfortunate that the Development Council at its last meeting held on 5-2-68 has confirmed the continuation of the existing formula. It is absolutely essential that we should have an accurate idea of the cost of automobile industry to the community in terms of foreign exchange so that a policy can be formulated with a view to reducing it within the shortest possible time. Looking at the pace of progress of indigenisation, it seems that the present degree of indigenisation would not have been attained, had it not been for the compulsion exercised by the foreign exchange scarcity. A purely Indian automobile is yet a distant dream.

7. A comparison of the progress of the automobile industry in India with that in advanced countries is not valid. But comparison can be made with Brazil which is a developing country like India with somewhat similar conditions despite marked differences. For, it has had an analogous development of the automobile industry during the same period. The automobile industry seems to have made a more rapid progress in Brazil than in India as can be seen from the follow-

ing table giving comparative figures of production of automobiles in 1957, 1961 and 1965:

TABLE 4
Production of automobiles in Brazil and India

Year	Brazil	India
1957.	30,700	32,762
1961.	145,674	54,432
1965.	185,160	72,599

Thus, the quantitative growth of the automobile industry cannot be said to be satisfactory as compared to that in Brazil. So far as indigenisation is concerned, it is reported that between December 31, 1956 and July 1, 1960 the average indigenisation of automobiles in Brazil increased from 41.6 per cent to 92.5 per cent by weight.

8. Progress in indigenisation especially in the early period was very tardy in India mainly due to non-adherence to scheduled manufacturing programme. Noticeable progress has, however, been made during the Third Plan period and that too because of the non-availability of foreign exchange.

9. Despite the priority given to the manufacture of commercial vehicles, the production of passenger cars has been relatively much more than that of commercial vehicles. This can be seen from the following table giving their respective figures of production:

TABLE 5
Production of passenger cars and commercial vehicles

Year	Passenger cars	Commercial vehicles
1957.	12,203	17,109
1962.	21,663	26,810
1966.	27,597	35,208
1967.	33,354	31,724

The major progress that took place in the production of commercial vehicles during the Third Plan period was mainly due to the defence demand. Priority to commercial vehicles was given in view of the fact that developing countries like India suffer from an inadequate infrastructure especially regarding communications. Expansion in the production of commercial vehicles is the function of development of the road transport industry. In their last Report (1956) the Tariff Commission had drawn specific attention to the necessity of removing the various factors which hampered the demand for commercial vehicles. Yet, most of these handicaps of the road transport industry not only persist, but some of them have been further accentuated by an increased burden of taxation, by excessive restrictions and by lack of uniformity in inter-State rules. The State Governments and local authorities tend to extract more and more revenue from the road transport industry. All these have increased the operation costs of commercial vehicles to a very great extent. This, coupled with the rising prices, has adversely affected the demand for commercial vehicles and consequently their production. The recent recession has accentuated the fall in demand and consequently the production of commercial vehicles.

10. I believe that bold and imaginative steps have to be taken in the light of the above appraisal if the automobile industry is to develop on sound lines, be a strength to our economy and service to the nation.

11. The first essential step is the rationalisation of the industry to check the harm done by the fragmentation of the volume of production in a number of units; for the advantages of competition have proved illusory. The units for the production of passenger cars and commercial vehicles are too many. The history of the industry may explain the number; but results do not justify their continuance. The economic and social needs of our country demand rationalisation. Government may, therefore, take all necessary steps for this purpose in view of the present system of controls. It is necessary to reduce the number of manufacturing units and also makes and models of vehicles to achieve economies of scale, to reduce the original cost, and to facilitate standardisation which could cut down the maintenance costs. The best way to do

this would be to weed out inefficient units—inefficient technically, financially, managerially efficiency to be judged on the basis of cost and quality. One way of weeding them out would be to expose such units to a full blast of foreign competition; but this would not be possible in the foreseeable future on account of our foreign exchange position. Another way is to compel the weaker manufacturing units to merge into stronger ones. This may be difficult for reasons historical and other. Yet another alternative is to introduce an element of real, internal competition, by allowing new units to enter the field. At first sight, this may appear like a step in the direction of further fragmentation. In practice, it will reduce fragmentation by weeding out weak units by competition; competition might even tone them up and obviate the need to weed them out, as demand for automobiles would rise. Indeed, there seems to be no other way. The existing units do not hold out hopes of any substantial reduction in costs even with an expanded volume of production of cars upto 50,000 units. The only method they suggest to reduce prices is the reduction of taxes. But it should be noted that except for the built-in taxes and duties on parts and components taxes and duties are not a cost to the industry but to the consumer. The question before us is the reduction of costs ex-factory by improvements in technical, financial and managerial efficiency. Since the existing units do not hold out hopes of reduction in costs, there is no alternative but to allow new entrants who promise to do so. Such a step is facilitated by the high degree of indigenisation now achieved by the automobile industry in our country. New entrants may be allowed a certain fixed quantum of foreign exchange for the necessary equipment; they will have to rely on indigenous materials and components. The proposed project for a new unit for small car (in private or public sector), if rightly and carefully selected, might provide the internal competition that seems to be so badly needed. The automobile industry in this country, it would appear, is apt to be apathetic and complacent. Competition alone can provide the necessary corrective.

12. I am not unaware of the difficulties regarding foreign exchange that will be required for capital equipment by new entrants, as all the equipment is not yet produced within the country. But these can be overcome by securing foreign

collaboration with financial participation. The present tendency in our country to bolster up weak and inefficient units by financial and other assistance for preventing unemployment is neither in the interest of labour nor of the country at large. Though it might yield temporary benefit of employment, it would not remove weaknesses and inefficiency. After considering all the factors and difficulties relating to the automobile industry, I am of the opinion that the best solution in the present circumstances would be compulsory merger of weaker and inefficient units into stronger ones in the larger interests of the automobile industry as well as the economy.

13. The ancillary industry too suffers from fragmentation like automobile industry and needs to be rationalised to gain economies of scale. It is, therefore, necessary that no new units in the ancillary industry be licensed at present till the existing efficient units become economically viable. Moreover, the tendency of vertical growth must be discouraged.

14. Another essential step is the reduction in the number of makes and kinds of vehicles. At the present stage of our economy, the real need is for durable, sturdy and rugged type of vehicles suited to our conditions. We should, therefore, emphasise utility and economy in our designs; there should not be more than one type in each category of the vehicles. That would facilitate standardisation which, in its turn, will increase the volume of ancillary production and thereby reduce the maintenance costs. Austerity rather than luxury should be the key-note of the industry, at least for some years to come.

15. In view of the sheltered market and supply falling short of demand for sometime to come, it is also necessary to introduce a system of built-in incentive through selective foreign exchange allotment for the import of necessary raw materials and equipment to efficient units.

16. A close check on the expansion of the installed capacity for passenger cars is also necessary so that the social objective of priority to commercial vehicles is not defeated. In future, installed capacity should be strictly regulated so that the economy gets its full benefit.

17. There is need for proper coordination and cooperation between the automobile manufacturers and the steel manufacturers with a view to ensuring regular and adequate supplies of indigenous steels which are the main bottleneck to-day. Similarly, close liaison between automobile industry and the machine tool industry is also needed as the growth of the automobile industry depends upon that of the machine tool industry. As the proper development of the automobile industry is dependent upon that of the ancillary industry, it is essential that the relationship between the vehicle manufacturers and the ancillary producers should be harmonious.

18. In the last analysis, quality is the responsibility of the automobile manufacturers. It has been rightly pointed out by a big British manufacturer of cars that inspection should not be confused with quality control as inspection exists only to differentiate between the good and the bad. Quality cannot be inspected into a car. If the quality is not there to begin with, no amount of inspection can put it in. A large inspection staff by itself will not help at all. It has been aptly observed: "A good inspector, it seems, is often he who pleases the management." Hence, quality consciousness on the part of the management is essential. Quality consciousness should permeate all levels and strict quality control methods need to be introduced.

19. Vigorous efforts at import substitution of raw materials with the help of modern technology should be made with a view to becoming independent of foreign supply and saving valuable foreign exchange.

20. Another important step that is necessary is the rationalisation of taxation on vehicles, substantial reduction of excise duty on commercial vehicles except on one-tonners which can be converted into passenger cars for individual consumption, if not its abolition*, replacement of multiple taxes, which have a built-in incidence leading to increase in costs, by a single point taxation and reduction of operation costs so as to stimulate the road transport industry by making it

*It may be noted that in U. K. commercial vehicles above 3 tons are exempted from purchase tax.

profitable and economically viable. I need not dilate on this point as the Keskar Committee has already examined this question in detail. For historical reasons the Government policy has been biased in favour of railways so far; it is high time that a rational road transport policy is evolved so that the automobile industry in India can be stimulated and strengthened. In this context we should not overlook the employment potential of the road transport industry which is very vital for an under-developed country like ours.

21. As early as 1953 the Tariff Commission had recommended that firms with a manufacturing programme should become independent of their foreign associates within as short a period as possible and that they should set up design and research sections of their own. I am constrained to observe that very little progress has been made in any of these directions. I would, therefore, emphasise the need for indigenous design development.

22. The involvement of foreign collaborators through financial participation is likely to help the progress of the Indian automobile industry by giving the collaborators direct interest in such progress. TELCO has successfully demonstrated this.

23. The tendency to rely upon foreign technicians even after 15 years while claiming to have become independent of foreign collaborators is certainly not a healthy sign. The need for as large a number of foreign technicians at present as before is merely an indication of the neglect of training of indigenous personnel. It is high time that we have confidence in our own engineering cadre which should be given all opportunities for development and improvement of the industry.

24. It is not possible to calculate the exact cost in terms of foreign exchange that has had to be incurred by the country on the automobile industry during the last ten years for lack of adequate data. Licences for imports given by different authorities are composite and do not give break-ups leaving loopholes regarding utilisation of the same. But for such loopholes unbalanced capacity in one direction could

not have been built up. Such wastage of foreign exchange should not be permitted.

25. Price control in the sheltered market seems to have created a belief that there is no scope for reduction in costs and has resulted in complacency about cost. Cost consciousness on the part of automobile as well as ancillary manufacturers is most essential for the sound and healthy development of the industry. Price elasticity of demand does not seem to have been realised by the industry. Reduction in prices is bound to stimulate demand and thereby encourage production. But the tendency of maintaining the prices at high level despite lack of demand is a curious phenomenon persisting in our country. This tendency needs to be corrected; for temporary smaller profits or losses for the time being would be compensated for by larger profits in future by the stimulation of demand.

26. The main objective of the development of the automobile industry in India, apart from its strategic importance, is to provide easy transport of men and materials at the least cost to the economy.

27. An under-developed country like ours should consider vehicles from two points of view, as production good and consumption good. Investment in commercial vehicles is production capital and that in passenger cars is consumption expenditure from the point of view of the economy as a whole. I am, therefore, of the opinion that the priority given to the production of commercial vehicles from the very beginning should not only be continued but also be effectively enforced. Positive steps are necessary to stimulate production of commercial vehicles rather than that of passenger cars.

28. In the context of social and economic objectives of our planning, it is necessary to encourage social consumption through public transport rather than individual consumption. Hence all the necessary measures should be taken to encourage the former. It may be noted, however, that the trend is exactly in the other direction as can be

seen from the following comparative figures of vehicle population in India in 1955-56, 1960-61 and 1965-66:

TABLE 6
Vehicle Population in India

	1955-56	1960-61	1965-66
Buses	46,461	56,792	75,900
Trucks	1,19,097	1,67,649	2,62,700
Private cars	1,87,866	2,87,913	4,22,000
Taxis	15,318	21,663	33,400

29. The automobile industry has attained its present position mainly as a result of protection granted and assistance given to it by Government. Yet, the sheltered market has not fostered a strong and efficient industry; it seems to have bred apathy and complacency. An industry that develops through protection has definite social obligations. A greater awareness of these social obligations by the industry and development along the lines indicated above, I hope, would help in building up a healthy automobile industry so vital to our country.

K. T. MERCHANT
Member

APPENDICES



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APPENDIX I

(Vide Paragraph 2·3)

List showing the present position of specified protected automobile components manufactured in the country

Group	Components	Manufactured by		
		Ancil-lary Mfrs.	Auto-mobile Mfrs.	Com-mon items
1	2	3	4	5
1. Engine	1. Rubber mountings	*	..	..
	2. Crank shaft	..	..	C
	3. Cam shaft	..	..	C
	4. Connecting rod	..	..	C
	5. Cylinder block and head	..	..	C
	6. Manifolds	..	..	C
	7. Valves	..	..	C
	8. Valve springs	*	..	..
	9. Fly wheel	..	..	C
	10. Timing gears	..	@	..
	11. Thin wall bearings	*	..	..
	12. Cylinder liners	*	..	..
	13. Oil pump	..	..	C
	14. Valve tappets	..	..	C
	15. Oil filters	*	..	..
	16. Gaskets	*	..	..
	17. Bushings other than oil impregnated	..	..	C
	18. Bushings oil impregnated	*	..	..
2. Clutch	19. Clutch housing	..	..	C
3. Trans-mission.	20. Rubber mountings	*	..	..
	21. Transmission gear and gear box	..	@	..

1	2	3	4	5
4. Cooling	22. Hose pipes with connections (other than fuel line hoses).	*	..	..
	23. Radiator	..	..	C
	24. Fan belt	*	..	..
	25. Water pump	..	..	C
	26. Fan	..	@	..
5. Fuel	27. Petrol tank	..	..	C
	28. Fuel line hoses with connections	*	..	..
	29. Carburettor	*	..	..
	30. Air cleaners	*	..	..
	31. Fuel pump diaphragms	*	..	..
	32. Fuel pumps	*	..	..
6. Electrical	33. Starting motors	*	..	..
	34. Generators	*	..	..
	35. Wire harness	..	..	C
	36. Distributor	*	..	..
	37. Lamp other than head lamp	*	..	..
	38. Head lamps including sealed beams	*	..	..
	39. Horn	*	..	..
	40. Horn not otherwise specified	*	..	..
	41. Battery and other cables made to size	..	..	C
	42. Sparking plugs not otherwise specified	*	..	..
	43. Windshield wipers	*	..	..
	44. Direction indicators	*	..	..
	45. Fuses	*	..	..
	46. Switches	*	..	..
	47. Voltage & current regulators	*	..	..
	48. Ignition coils	*	..	..

1	2	3	4	5
7. Exhaust .	49. Exhaust pipes . . .	..	..	C
	50. Mufflers . . .	..	..	C
	51. Tail pipes . . .	..	..	C
8. Propeller shaft with universal joints	52. Propeller shafts . . .	..	..	C
	53. Universal joints including needle bearings therefor . . .	..	..	C
9. Suspension front including shock absorbers & springs	54. Front axles . . .	..	@	..
	55. Front suspension excluding coil springs . . .	..	..	C
	56. Suspension coil springs	*	..	..
10. Rear axle including shock absorbers & wheel hubs & axle	57. Rear axle assembly (axle housing, axle shaft, differential pinion and carrier differential) . . .	..	@	..
	58. Roller bearings . . .	*	..	..
11. Steering .	59. Sprockets . . .	..	@	..
	60. Steering mechanisms . . .	..	..	C
12. Brakes with brake drums	61. Hubs & brake drums . . .	..	..	C
	62. Brake hose pipes . . .	*	..	..
	63. Brake cylinders . . .	*	..	..
13. Wheels .	64. Pressed wheel . . .	*	..	..
14. Frame & chassis	65. King pins . . .	..	..	C
	66. Shackle pins . . .	*	..	..
	67. Shock absorbers . . .	..	..	C
	68. Spring hanger brackets . . .	..	..	C
	69. Shackles . . .	..	..	C
	70. Rubber components not otherwise specified . . .	*	..	..

1	2	3	4	5
15. Body with upholstery	71. Carpets (made to size or shape)	*	..	..
..	72. Cushion springs	*	..	..
..	73. Door & window fittings excluding glass.	*	..	..
..	74. Trim materials (leather, plastic, jute, canvas and leather cloth) made to size or shape	*	..	..
..	75. Bus bodies	*	..	..
..	76. Station wagon bodies	..	..	C
..	77. Truck bodies	*	..	..
..	78. Steel cabs for lorries	..	@	..
..	79. Pick up bodies	..	..	C
..	80. Parcel van bodies	*	..	..
..	81. Seat runners	*	..	..
..	82. Short members of chassis frame & brackets	..	@	..
..	83. Toughened glass sheets	*	..	..
..	84. Long members of chassis frames	..	@	..
..	85. Body panels including turret tops and sides for passenger, motor cars including taxi cabs	..	@	..
..	86. Bumpers	..	..	C
16. Instrumentation	87. Electrical panel instruments	*	..	..
..	88. Panel instruments other than electrical	*	..	..

NOTE.—This table has been compiled on the basis of information readily available in this office and is intended to give a general idea of the progress made by this industry since 1956. In the note * indicates items manufactured by the ancillary manufacturers, @ indicates those manufactured by the automobile manufacturers and 'C' indicates items manufactured by both.

APPENDIX II

(Vide Paragraph 2*3)

Names of some important automobile ancillary items and their manufacturers

1. ENGINE VALVES

1. Acme Mfg. Co. Ltd., Bombay.
2. Engine Valves Ltd., Madras.
3. Shama Engine Valves Ltd., New Delhi.
4. Inex Engine Valves Ltd., New Delhi.
5. Hindustan Motors Ltd., Uttarpara.

2. THIN WALLED BEARINGS AND BIMETALLIC STRIPS

1. Upper India Bearing Co. Ltd., Madras.
2. Kirloskar Oil Engines Ltd., Poona.
3. Bimetal Bearings Co. Ltd., Madras.

3. CYLINDERS LINERS

1. India Pistons Ltd., Madras.
2. Simpson & Co. Ltd., Madras.
3. Shama Pistons and Rings Ltd., New Delhi.
4. Canara Workshops Ltd., Mangalore.
5. Ex-Cell-O (India) Ltd., Bombay.
6. Goetze (India) Ltd., New Delhi.

4. OIL PUMPS AND SPARES

Kothan Auto Spares and Accessories Ltd., Rajkot.

5. TAPPETS

1. Engine Valves Ltd., Madras.
2. Prefect Engineering Products Ltd., Bombay.

6. FILTERS

1. H. J. Leach & Co. (Pvt.) Ltd., Bombay.
2. Motor Industries Co. Ltd., Bangalore.
3. John Fowler (India) Pvt. Ltd., Calcutta.
4. Tecalemit (Hind) Ltd., Calcutta.
5. Fritz and Singh (Pvt.) Ltd., Calcutta.

7. GASKETS

1. Payen Talbros Ltd., New Delhi.
2. Victor Gaskets India Ltd., Bombay.
3. Gaskets and Oil Seals Pvt. Ltd., Baroda.

8. CLUTCH HOUSING**(a) Complete Clutch Assembly**

1. Automobile Products of India Ltd. Bombay.
2. Turner Hoare & Co., Bombay.
3. Luk Auto Ancillary (Pvt.) Ltd., New Delhi.
4. Bharat Auto Parts Mfrg. (Pvt.) Ltd. (Gujarat.)

(b) Clutch Plates

1. India Piston-Repco Ltd., Madras.
2. Tarasingh Harbinder Singh, Bombay.
3. Rane (Madras) Ltd., Madras.
4. Automobile Products of India Ltd., Bombay.

(c) Clutch Facings

1. Hindustan Ferrodo Ltd., Bombay.
2. Bramec Suri (Pvt.) Ltd., Delhi.
3. Rane (Madras) Ltd., Madras.

9. GEARS AND SHAFTS

1. Napco Bevel Gear Co. of India, New Delhi.
2. Escorts Transmission Ltd., Faridabad.
3. Ramon and Demm Ltd., Bombay.

10. RADIATORS

1. India Radiators Ltd., Madras.
2. Teksons (Pvt.) Ltd., Bombay.
3. Union Co. (Accessories) Pvt. Ltd., Madras.
4. Universal Radiators, Coimbatore.
5. Gaskets and Oil Seals Pvt. Ltd., Baroda.
6. Bharat Radiators Pvt. Ltd., Bombay.

11. WATER PUMPS

Injecto (Pvt.) Ltd., Jaipur.

12. FUEL HOSES

Teksons Pvt. Ltd., Bombay.

13. CARBURETTORS

1. Carburettors (Pvt.) Ltd., Madras.
2. Injecto (Pvt.) Ltd., Jaipur.
3. Inspi Auto Industries Ltd., New Delhi.
4. S. D. Pandya, Bombay.

14. FUEL PUMP DIAPHRAGM

Injecto Pvt. Ltd., Jaipur.

15. FUEL PUMPS

1. Carburettors (Pvt.) Ltd., Madras.
2. Auto Accessories, Dehra Dun.
3. Injecto (Pvt.) Ltd., Jaipur.
4. Inspi Auto Industries Ltd., New Delhi.
5. Premnath Motors Ltd., New Delhi.

16. STARTER MOTORS

1. Lucas TVS Ltd., Madras.
2. Globe Auto Electricals Ltd., Bombay.
3. Best & Co. (Pvt.) Ltd., Madras.
4. Orient General Industries, Calcutta.

17. GENERATORS (DYNAMOS)

1. Lucas TVS Ltd., Madras.
2. Orient General Industries Ltd., Calcutta.
3. Best & Co. Ltd., Madras.
4. Globe Auto Electricals Ltd., Bombay.

18. WIRE HARNESS PANEL HARNESS

1. Orient General Industries Ltd., Calcutta.
2. Racmann Koshatkin (Regd.), New Delhi.
3. Union Co. (Accessories) Ltd., Madras.

19. DISTRIBUTORS

1. Lucas TVS Ltd., Madras.
2. Globe Auto Electricals Ltd., Bombay.
3. Prestotite of India Ltd., New Delhi.

20. LAMPS

1. Prestolite of India Ltd., New Delhi.
2. Usha Auto Engg. Pvt. Ltd., Calcutta.
3. Kalina Metal Co., Bombay.
4. Racmann Koshatkin, New Delhi.
5. Auto Pins (India), Delhi.
6. Lucas TVS Ltd., Madras.
7. J.M.A. Industries I td., Delhi.
8. T. I. Miller Ltd., Madras.
9. Ashok V. Mehta, Bombay.
10. Ronuk Industries, Bombay.

21. SEALED UNITS FOR HEAD LAMPS

Ashok V. Mehta, Bombay.

22. ELECTRIC HORNS

1. Himco India (P) Ltd., Bombay.
2. Sharco Industries (P) Ltd., Delhi.
3. Orient General Industries, Calcutta.
4. J.M.A. Industries Ltd., Delhi.
5. Lucas TVS Ltd., Madras.
6. Acme Batteries (P) Ltd., Delhi.
7. Pestolite of India Ltd., New Delhi.
8. Union Co. (Accessories) P. Ltd., Madras.

23. STORAGE BATTERIES

1. Bharat Battery Mfg. Co. (I) Ltd., Calcutta.
2. Indian Battery Mfg. Co. (P) Ltd., Calcutta.
3. Electrical Storage Co. Ltd., Calcutta.
4. Eastern Accumulators Co. (P) Ltd., Calcutta.
5. Free India Dry Accumulators Ltd., Calcutta.
6. Standard Batteries Ltd., Bombay.
7. Himco (I) P. Ltd., Bombay.
8. ACME Batteries P. Ltd., Delhi.
9. Oldham and Sons (P) Ltd., Madras.
10. Amco Batteries Ltd., Bangalore.
11. Mysore Electro-Chemical Works Ltd., Bangalore.
12. Associated Battery Makers (Eastern) Ltd., Calcutta.

24. SPARKING PLUGS

1. Motor Industries Co. Ltd., Bangalore.
2. Auto Accessories India Ltd., Bombay.

25. WINDSCREEN WIPER ASSEMBLY

1. Lucas TVS Ltd., Madras.
2. Globe Industries (P) Ltd., Bombay.
3. Prestolite of India Ltd., New Delhi.
4. J. M. A. Industries Ltd., Delhi.

26. SWITCHES & FLASHER UNITS

1. G. M. C. Auto Electricals Ltd., Bombay.
2. G. M. C. Himco India Ltd., Bombay.
3. J. M. A. Industries Ltd., Delhi.
4. Lucas TVS Ltd., Madras.
5. Orient General Industries Ltd., Calcutta.
6. Prestolite of India Ltd., New Delhi.

27. VOLTAGE REGULATORS

1. Lucas TVS Ltd., Madras.
2. Best & Co. (P) Ltd., Madras.
3. Prestolite of India Ltd., New Delhi.
4. Tools and Electricals (I) Ltd., Calcutta.
5. Globe Auto Electrical Ltd., Bombay.
6. Orient General Industries Ltd., Calcutta.

28. IGNITION COILS

1. Prestolite of India Ltd., New Delhi.
2. Lucas Indian Service (P) Ltd., Madras.
3. Globe Industries (P) Ltd., Bombay.

29. SILENCER MUFFLERS, ETC.

Usha Auto Engg. Co. Ltd., Calcutta.

30. PROPELLER SHAFTS

Ex-Cell-O (I) Ltd., Bombay.

31. UNIVERSAL JOINTS

1. Hind Auto Industries Ltd., Lucknow.
2. Kothari Autoparts Mfrs. Ltd., Bombay.

3. Tarasingh Harbinder Singh, Bombay.
4. Bharat Autoparts Mfrs. (P) Ltd., (Gujarat).
5. Atlas Automotive Components Ltd., Bombay.

32. AXLE SHAFTS

1. Napco Bevel Gear of India Ltd., New Delhi.
2. Metropolitan Springs (P) Ltd. Bombay.
3. Bahri Auto Corpn. (P) Ltd., Bombay.
4. Premier Automobiles, Bombay.

33. BALL AND ROLLER BEARINGS

1. National Engg. Industries Ltd., Jaipur.
2. Antifriction Bearings Corpn. Ltd., Lonavala.
3. Bharat Ball Bearing Co. Ltd., Ranchi.
4. Precision Bearings (I) Ltd., Baroda.
5. Associated Bearing Co. Ltd., Poona.
6. P. S. Ball Bearing Co., Faridabad.
7. Indo-Nippon Precision Bearings Ltd., Hyderabad.
8. Needle Roller Bearings (India), Bombay.

34. STEERING MECHANISMS

(a) *Steering Linkages*

Rane (Madras) Ltd., Madras.

(b) *Steering Gears*

1. Globe Industries (P) Ltd., Bombay.
2. Ex-Cell-O (I) Ltd., Bombay.

(c) *Steering Wheels*

1. Emdet Engineers, Amritsar.
2. Auto Steering India (P) Ltd., New Delhi.

35. HUBS AND BRAKE DRUMS

(a) *Brake Drum Assembly*

1. Acme Mfg. Co. Ltd., Bombay.
2. Canara Workshops Ltd., Mangalore.
3. Automobile & Agricultural India Co. Ltd., Bombay.

(b) *Hubs & Hub Caps*

Canara Workshops Ltd., Mangalore.

36. BRAKE HOSE PIPES
(Hydraulic Brake Hoses)

1. Western Auto Parts, Bombay.
2. Teksons (Pvt.) Ltd., Bombay.
(Brake and Vacuum Hoses)
3. Super Seals India (P) Ltd., New Delhi.
(Hydraulic Rubber Brake Hoses)

37. BRAKE CYLINDERS
(Master Cylinder Components)

1. Davis & White (I) Ltd., New Delhi.
2. Super Seals India (P) Ltd., New Delhi.

38. WHEELS AND RIMS

1. Wheels India Ltd., Madras.
2. Sankey Wheels Ltd., Durgapur.

39. KING PINS

1. Auto Pins, Faridabad.
2. Kothari Autoparts Mfrs. (P) Ltd., Bombay.
3. Sri Ramdas Motor Transport, Kakinada.
4. Jayaraj Nadar and Sons, Madurai.
5. Elgi Equipment (P) Ltd., Coimbatore.
6. Gurmukh Singh and Sons, Ludhiana.
7. Nathani Industries Pvt. Ltd., Bombay.
8. Hind Auto Industries Ltd., Lucknow.

40. SHAKLE PINS

1. Shri Ramdas Motor Transport, Kakinada.
2. Gurmukh Singh & Sons, Madurai.

41. SHOCK ABSORBERS

1. Hydraulics (P) Ltd., Madras.
2. Premier Automobiles Ltd., Bombay.
3. Hind Equipment Corpn. Ltd., Bombay.
4. Gabriel India (P) Ltd., Bombay.
5. Escorts Ltd., New Delhi.

42. DOOR & WINDOW FITTINGS EXCLUDING GLASS

(a) *Doorlocks/Remote Control*

Usha Auto & Engg. Co. Ltd., Calcutta.

(b) *Window Regulators*

Usha Auto & Engg. Co. Ltd., Calcutta.

43. SAFETY GLASS

(a) *Laminated Variety*

1. Hindustan Safety Glass Works (P) Ltd., Calcutta.
2. Shree Vallabh Glass Works Ltd., Anand.
3. Atul Glass Industries, New Delhi.

(b) *Toughened Variety*

1. Hindustan Safety Glass Works (P) Ltd., Calcutta
2. Shree Vallabh Glass Works Ltd., Bombay.

(c) *Variety of Toughened Glass*

1. Hindustan Safety Glass Works (P) Ltd., Calcutta.
2. Shree Vallabh Glass Works Ltd., Bombay.

44. PANEL INSTRUMENTS

1. International Instruments Pvt. Ltd., Bangalore.
2. Automoters Ltd., New Delhi.

NOTE.—The above list is only illustrative and not exhaustive.

APPENDIX III
(Vide Paragraph 2·4)

No. 20(1)-Tar/66

GOVERNMENT OF INDIA
MINISTRY OF COMMERCE

New Delhi, the 31st May, 1966

From

Shri S. Banerjee,
Deputy Secretary to the
Government of India.

To

The Secretary,
Tariff Commission,
C.G.O. Building,
101, Queen's Road, Bombay-1.

SUBJECT.—*Price enquiries on Automobiles and ancillary industries
etc.—Reference to the Tariff Commission regarding—*

Sir,

I am directed to refer to the correspondence ending with this Ministry's letter No. 8(1)-Tar/64, dated the 26th/27th July, 1965 regarding price structure of automobile industry and to state as follows :—

- (1) Protection granted to the Automobile industry is due to expire on the 31st December, 1967 and the Commission will shortly be undertaking a review of the industry to decide the question of need for continuance or otherwise of the protection thereto beyond 31st December, 1967. The Tariff Commission while investigating into the industry will no doubt examine the cost of production of automobiles produced by some of the units for the limited purpose of determining the quantum of protection required by the Automobile Industry.
- (2) The Commission is aware that Government is exercising an informal control over the prices of automobiles. Though the automobile units have been subjected to cost examination by the Cost Accounts Officers of the Ministry of Finance on some occasions in the past, no systematic study of the production costs of the industry has been made so far the purpose of determining the fair selling prices of automobiles. Government, therefore, feel that it would be advantageous if the Tariff Commission could enquire, as a part of its tariff enquiry about the automobile industry, into the cost structure and fair selling prices of automobiles.

I am therefore to request the Tariff Commission under Section 12(d) of the Tariff Commission Act, 1951 to undertake an enquiry into the production cost of automobiles and to furnish its recommendation/Report to Government about the fair selling prices of the different types of automobiles at present under production in the country.

- (3) At present two automobile ancillary industries viz., (i) Piston Assembly and (ii) Fuel Injection Equipment (multi-cylinder pumps only) are under protection and protection to the former is due to expire on 31st December, 1966. Government have been receiving complaints that while Government exercises rigid control over the prices of the main automobile producers, no such control is exercised in the case of automobile ancillary industries. There were certain complaints also that the prices charged by the ancillary manufacturers for O.E. manufacturers are exorbitant. To ascertain the correct position, some of the important ancillary manufacturing units were cost examined by the Cost Accounts Branch of the Ministry of Finance last year. Cost Reports of these units have revealed that the selling prices of some of the units have been on the high side. In order to probe the matter in a more systematic and comprehensive manner, it is considered desirable that simultaneously with an enquiry into the selling prices of the main automobile manufacturers, the Commission should undertake an enquiry into the cost structure of some of the major ancillary industries also, with a view to determine their fair selling prices. I am therefore to request the Tariff Commission under Section 12(d) of the Tariff Commission Act, 1951 to enquire into and to furnish its recommendation/Report to Government on the fair selling prices of ancillary industries. It is, however, at the discretion of the Commission to select such items for cost examination which may contribute substantially to the economics of the production of vehicles by the main manufacturers.
- (4) Another aspect which the Government would like the Tariff Commission to go into is the profit margin to be allowed to the dealers in commercial vehicles and cars. On the basis of the last Report of the Commission the margin was fixed at $7\frac{1}{2}\%$ of the then ex-factory cost in the case of commercial vehicles and 10% of the net ex-factory cost in the case of car. Since then Government have approved several increases in prices of commercial vehicles and cars on account of various factors such as increase in the overseas price of imported components, increase in Government levies, etc., but in doing so, Government have made it a condition that there would be no corresponding increase in the profit margin of the dealers or manufacturers. This has resulted in the dealers' margin being pegged at the level originally fixed. In this regard also Government have received several representations from the dealers saying that the margin left to them is quite inadequate in view of the steadily rising costs and have requested for suitable increase in the profit

margin. I am to request that the Tariff Commission may kindly take a note of this position and submit their recommendation on this point also.

2. It will be appreciated if the price fixation reports referred to in the above paragraph and the Tariff protection report are submitted separately to Government.

The favour of an urgent action is requested.

Yours faithfully,

Sd/-

(S. BANERJEE)

Deputy Secretary to the Govt. of India.



APPENDIX IV

(Vide Paragraph 3·2)

List of those to whom Commission's questionnaires or letters were issued and from whom replies or memoranda were received

*Those who have replied.

@Those who are not interested.

A. PRODUCERS

- *1. Hindustan Motors Ltd., P.O. Uttarpara, Distt. Hooghly, *West Bengal*.
- *2. Premier Automobiles Ltd., Agra Road, Kurla, *Bombay-70 (AS)*.
- *3. Standard Motor Products of India Ltd., 29, Mount Road, *Madras-2*.
- *4. Ashok Leyland Ltd., "TIAM" House, 11/12, North Beach Road, *Madras-1*.
- *5. Tata Engg. & Locomotive Co. Ltd., (TELCO) Bombay House, 24, Bruce Street, Fort, *Bombay-1*.
- *6. Mahindra & Mahindra Ltd., Gateway Building, Apollo Bunder, *Bombay-1*.
- *7. Bajaj Tempo Ltd., Bombay-Poona Road, Chinchwad, *Poona-19*.
- *8. Simpson & Co. Ltd., Post Box No. 303, 202-3, Mount Road, *Madras-2*.

B. PRODUCERS' ASSOCIATIONS

- *1. Association of Indian Automobile Manufacturers, Army & Navy Building, Third Floor, Mahatma Gandhi Road, Fort, *Bombay-1*.
- 2. All India Automobile & Ancillary Industries Association, 80, Dr. Annie Besant Road, Worli, *Bombay-18*.
- *3. Automotive Engineers Society 78-B, Annie Besant Road, *Bombay-18*.

C. FLEET OWNERS

(i) *Public Transport Undertakings.*

- *1. The General Manager, B.E.S.&T. Undertaking, Best House, Colaba, *Bombay-1*.
- 2. The Transport Manager, Poona Municipal Transport, Swargate, *Poona-2*.

- *3. The Director, Madras State Transport Department, Transport House, Mount Road, *Madras*.
- *4. The General Manager, Kerala State Road Transport Corporation, *Trivandrum*.
5. The Chief Executive Officer, Andhra Pradesh State Road Transport Corporation, Mushirabad, *Hyderabad*.
- *6. The General Manager, Mysore State Road Transport Corporation, Transport House, Kengal Hanumanthaiya Road, Shantinagar *Bangalore-27*.
- *7. The General Manager, Madhya Pradesh State Road Transport Corporation, Stores & Purchase Department, Bairagarh, *Bhopal*.
8. The Transport Controller, *Cuttack*.
9. The General Manager, Bihar State Road Transport Corporation, Sultan Palace, Gardiner Road, *Patna*.
- *10. The General Manager, Calcutta State Transport Corporation, 5. Nilgunge Road, Balghoria, *Calcutta-56*.
11. The Director of Transport, Government of Assam, Transport & Industries Department, *Shillong*.
12. The General Manager, Manipur State Transport, *Imphal*.
13. The U. P. Parivahan Ayukta (Roadways-Operation), Karyalaya Parivahan Ayukta, *Lucknow*.
- *14. The General Manager (Transport), Delhi Transport Undertaking, (of the Municipal Corporation of Delhi), I.P. Estate, *NEW DELHI-1*.
15. The General Manager, Himachal Government Transport-*Simla*.
16. The General Manager, M. K. Road Transport Corporation, *Mandi*.
17. The State Transport Controller, Jammu & Kashmir Transport Services, *Srinagar*.
18. The Provincial Transport Controller, Punjab Transport Department, New Secretariat, *Chandigarh*.
19. The General Manager, Pepsu Road Transport Corporation, *Patiala*.
20. The General Manager, Rajasthan State Road Transport Corporation, *Jaipur*.
- *21. Vice-Chairman and General Manager, Gujarat State Road Transport Corporation, Central Offices, Vahan Vyavahar Bhavan, Astodia, *Ahmedabad-17*.
- *22. The Transport Manager, Ahmedabad Municipal Transport Service, Transport House, Outside Jamalpur Gate, P.O. Box No. 142, *Ahmedabad-1*.
- *23. The General Manager, Maharashtra State Road Transport Corporation, Central Stores, Bellasis Road, Byculla, *Bombay-8*.

(ii) *Private fleet owners.*

1. The Mahalaxmi Transport Co. Ltd., Noor Hospital Building, *Bombay-3.*
2. Ghatge & Patil (Transport) Private Ltd., *Kolhapur.*
- *3. Singh Transport Co., 275, Reay Road, *Bombay-10.*
4. Prakash Road Lines Private Ltd., 296, Carnac Road, *Bombay-2.*
5. Latif Gani & Sons, 99, Sewri, Kolwada Road, *Bombay-15.*
6. Irani & Co., Dhobi Galli, Zakeria Masjid, *Bombay-15.*
7. Mangatram Bros., Frere Road, *Bombay-9.*
8. Road Transport Co., 56, Burtolla Street, *Calcutta-7.*
9. Malda Transport Co., 7, Chowringhee Road, *Calcutta-13.*
- *10. Hanumanprasad Laxminarayan (Transport), 207, Maharshi Debendra Road, *Calcutta-7.*
11. Road Transport Corporation, 14, Tarachand Dutta St., *Calcutta.*
12. Interprovincial Transport Co., 57, Radhabazar Street, *Calcutta.*
13. Bharat Transport, Mithapur, *Patna-1.*
- *14. Central Road Transport Corporation Ltd., 18, Rabindra Sarani, *Calcutta-1.*
15. Dhillon Transport Agency, Hajiganj, *Patna City.*
16. Jain Transport Co., *Bhagalpur-2.*
17. Bengal Behar Transport Co. (Calcutta) Pvt. Ltd., 13, Cama Street, *Calcutta.*
18. Inter State Transport Agency, 134/1, Mahatma Gandhi Road, *Calcutta-7.*
19. The Rohtak District Transport Co-operative Society Ltd., 65-66 Gokhale Market, *Delhi-6.*
- *20. Southern Roadways Pvt. Ltd., Usilampathi Road, Kochadai, *Madurai.*
21. Annamalais Bus Transport Ltd., Goods Shed Road, *Pollachi.*
22. M.B.T.Co., 36, Second Line Beach, *Madras.*
23. Road Transport Corporation Private Ltd., 302, Lingi Shetti Street, *Madras.*
24. Ramdas Motor Transport Private Ltd., *Kakinada.*
25. Natwar Transport Co. Ltd., *Nagpur-2.*
26. Bengal Transport Co., 11, Landsdowne Road, *Calcutta-20.*
- *27. Ashoke Transport Agency, 94, Chittaranjan Avenue, *Calcutta-12.*
28. Satyanarayan Transport, Paknati House, *Berhampur.*
- *29. United Transport Co., Mukhtiyargunj, *Hyderabad.*
- *30. Muzaffarpur Motor Transport Co-operative Society Ltd., Motijhil, *Muzaffarpur.*

31. Air Assam, 81-B, Lower Chitpur Road, *Calcutta-7.*
32. Air Transport Corporation, 14, Tarachand Dutt Street, *Calcutta-7.*
33. Allahabad Transport Co., (Regd.), Railway Road, *Kanpur.*
- @34. Ambala Ex-Servicemen Co-operative Society Ltd., *Ambala City.*
- @35. A.P.T. Company, 160, Govindappa Naik Street, *Madras-1.*
36. Amritsar Transport Company Private Ltd., *Amritsar (Punjab)*
- *37. Anjaneya Motor Transport Private Ltd., 225, Cauvery Road, *Erode-3.*
38. Associated Traders & Engineers Private Ltd., 20A, Asaf Ali Road, *New Delhi.*
39. Arjuna Motor Transport Co., *Erode. (Madras State).*
40. Andhra Pradesh Motor Union's Congress, 4-3-349, Bank Street, Sultan Bazar, *Hyderabad-1.*
41. The All Kerala Private Motor Transport Owners' Federation, Venkitram Bldg., *Trichur.*
42. Anand Transport Co. Private Ltd., *Raipur.*
- *43. Bombay Andhra Transport Co., 113, Bhandari Street, Chakala, *Bombay.*
- *44. Bharat Transport Company, Sardar Patel Marg., *Allahabad.*
45. Baxi Singh & Co., Kashiram Jamnadas Building, 5, P.D'Mellow Road, *Bombay-9.*
46. Bengal Bus Syndicate, 6, Dharamtolla Street, *Calcutta-1.*
47. Carryco, 26, Zakaria Street, *Calcutta-1.*
48. Chadha Motor Transport Co. Private Ltd., Ghee Mandi, *Amritsar. (Punjab).*
49. Commercial Transport Co., 107, Thamba Chetty Street, P.B. No. 1254, *Madras-1.*
50. Canara Public Conveyance Co. Ltd., P.B. No. 85, *Mangalore (Mysore).*
51. Combined Transport Services (Bilaspur) Private Ltd., *Bilaspur.*
- *52. Capital Bus Service Private Ltd., 20/1, Asaf Ali Road, *New Delhi-1.*
53. Cuttack Motor Association, Durga Bazar, *Cuttack, (Orissa).*
54. Delhi Malout Transport Co. (Regd.), *Malout. (Punjab).*
55. Delux Roadways, Sadar Bazar, *Delhi-6.*
56. Durg Transport Co. Private Ltd., *Durg. (M.P.)*
57. Everst Roadways, 10, Tarachand Dutt Street, *Calcutta-1.*
58. Everst Transport Company, 9, Tarachand Dutt Street, *Calcutta-1.*
59. Gills Goods Carriers Private Ltd., Lahori Gate, *Delhi-6.*

- *60. G. Shantilal Transport Co., 3, Cement Chawl, **Katha Bazar, Bombay-9.**
- 61. Grand Azad Hind Transport Co., C.I.T. Plot 15, Scheme No. LV, **Calcutta.**
- 62. Green Roadways, Sadar Thana Road, Barahooti, **Delhi-6.**
- 63. Garhwal Motor Owners' Union Ltd., **Kordwar (Garhwal).**
- *64. The Hanuman Transport Co. Private Ltd., 76, Badagabettu, **Udipi.**
- ⑥65. Hindustan Transport Ltd., 5, Patullos Road, Mount Road, **Madras-2.**
- 66. I.S. Goel & Company, 16, Sunder Nagar, Market, **New Delhi.**
- 67. Issak Brothers, Poona Street, Dana Bunder, **Bombay-9.**
- *68. Jaipur Golden Transport Co. Private Ltd., XII/4736-41, Roshanara Road, **Delhi-7.**
- 69. Janta Garage, Gandhi Bagh, **Nagpur (Maharashtra).**
- 70. Jullunder District, Ex-Servicemen Motor Transport Co-operative Society Ltd., Ladwali Road, **Jullundur City.**
- 71. Jayindar Singh & Sons, C/o. Allied Agencies, Tej Bahadur Sapru Marg., **Lucknow. (U.P.)**
- 72. Jammu Kashmir Transporters' Association, **Jammu (J. & K State).**
- 73. Kanpur Delhi Goods Carriers Private Ltd., Naya Bazar, **Delhi.**
- 74. Kapoor Transport & Forwarding Agencies (Regd.), Latouche Road, **Kanpur (U.P.)**
- 75. Nanded Motor Owners Association Old Monda, **Nanded.**
- 76. Kanpur Bombay Motor Transport Co. Private Ltd., Birhana Road, **Kanpur.**
- *77. Kilburn & Co., Ltd., Road Transport Department, 2, Fairlie Place, **Calcutta-1.**
- 78. Khuda Bax & Sons, **Dhanbad (Bihar).**
- 79. Krishna Bus Service (P) Ltd., 1, Green Hotel Church Mission Road, Fatehpuri, **Delhi-6.**
- 80. Kamal Bus Service (P) Ltd., Sobha Singh Building, Ajmeri Gate, **Delhi.**
- *81. Kumaon Motor Owners' Union Ltd., **Kathgodam.**
- 82. Kashmir Motor Drivers' Association, **Srinagar (Kashmir).**
- 83. Madras Bangalore Transport Co., 36, Secnd Line Beach, P.B. No. 1984, **Madras-1.**
- 84. Mahadeswara Lorry Service (Regd.) No. 9, 4th Cross Road, Rama Mansion, New Kalasipalayam Lay-out, **Bangalore-2. (Mysore).**

85. Montgomery Co-operative Goods Society Ltd., 3868, Roshanara Road, *Delhi*.
86. Mujaawar & Company Transport Agents, Anees Chambers, Carnac Road, *Bombay-1*.
- *87. M.G. Brothers Lorry Service, *Yemmiganur (Kurnool Distt.)*
88. Malabar Bus Owners' Association, G.M.M.S. Building, *Calicut*.
89. Madras State Bus Owners' Association, 49, General Patters Road, Mount Road, *Madras-2*.
90. Ram Gopal Satya Narain Gupta, *REWA. (M.P.)*.
- *91. M. Tilak & Company (Jamshedpur), 'Anand Bhuvan'. Barendrapur, 24 Parganas, *West Bengal*.
92. Newat Transport Private Ltd., 733, Church Mission Road, Hindu Sarai, *Delhi*.
- *93. New India Transport Co., 18, Tarachand Dutt Street, *Calcutta-1*.
94. New Janta Goods Transport Co., Daresi No. 2 *Agra*.
95. New Kashmir & Oriental Transport Co. Private Ltd., Flat No. 81, Nava Market, Parade, *Kanpur*.
96. New Suraj Transport Co. Private Ltd., Outside Gandhi Gate, *Amritsar. (Punjab)*.
97. Northern India Goods Transport Co. Private Ltd., Naya Bazar, *Delhi-6*.
98. New Howrah Transport Co., 1704, Pilli Kothi, S.P. Mukherjee Marg, *Delhi-6*.
99. New Bengal Transport Corporation, 159, Chittaranjan Avenue, *Calcutta*.
100. North Bihar Transport Syndicate, Motigheel, *Muzaffarpur. (Bihar)*
101. Okara Goods Transport Co., Behind Pili Kothi, S.P. Mukherjee Marg., *Delhi-6*.
102. Punjab Motor Union, No. 78, Section 18-A, *Chandigarh. (Punjab)*.
103. Raju & Mannar Lorry Transport, *Salem-2. (Madras State)*
104. Rajasthan Golden Transport Co. Private Ltd., Naya Bazar *Delhi-6*.
105. Raipur Transport Co. Private Ltd., *Raipur*.
106. Rajnadgaon Roadways Private Ltd., *Rajnadgaon (M.P.)*.
107. R. Sen & Company, 13, Camac Street, *Calcutta-16*.
108. R. D. Roy & Sons, 53, Netaji Subhas Road, *Calcutta-1*.
109. Rattanlal Surajmull, (Transport Department), *Ranchi. (Bihar)*.
110. R. K. Budhia & Company, *Ranchi. (Bihar)*.
111. Rama Bus Service Private Ltd., Elgin Road, Opp. Edward Park, *Delhi*.

- *112. Savani Transport Private Ltd., 163, D'Mello Road, *Bombay-1.*
- *113. S. C. Bros., Lorry Transport Service, 41, Narapimha Chettiar Road, *Salem-2.*
- 114. S.P.K.T. Co. (Regd.) 2/28, Muker Nallamuthu Street, *Madras-1.*
- 115. Sri Rama Vilas Service Ltd., P.B. No. 320, 1/17, Mount Road, *Madras.*
- 116. South Eastern Roadways, 134/4, Mahatma Gandhi Road, *Calcutta-7.*
- 117. Shri Nivasa Roadways, *Madurai, (Madras State).*
- 118. Shri Palaniappa Transport Co., 19, Manangappen Street, *Madras-1.*
- 119. Shri Rama Das Motor Transport Private Ltd., P.B. No. 42, *Kakinada. (A.P.).*
- 120. Shri Vijay Laxmi Lorry Service (Regd.), 8/9, Singanna Naick Street, Post Bag. No. 5065, *Madras-1.*
- 121. Surag Goods Carriers Private Ltd., O/S Gandhi Gate, *Amritsar, (Punjab).*
- 122. Sindhi Sahiti Multi-purpose Co-operative Society Ltd., Hamidia Road, *Bhopal.*
- 123. Sudarshan Transport Service Private Ltd., *Bilaspur.*
- 124. Thirumurugan Lorry Transports, *H. O. Perundurai. (S. India).*
- *125. Transport Corporation of India Private Ltd., 25-27, Kalikrishna Tagore Street, *Calcutta-7.*
- 126. United Stores, *Mercara. (Coorg).*
- 127. United Stores, P.B. No. 97, *Mangalore.*
- 128. Vasundara Lorry Service, New Tharagupet, *Bangalore.*
- 129. Mehta Transport Company, Kerosene Bazar, 581, Bhatia Vadi, *Ahmedabad-2.*
- 130. Yatayat Aur Paryatan Vikas Sahkari' Sangh Ltd., *Muni-ki-Reti, P.O. Rishikesh, Distt. Dehradun.*
- *131. The General Manager, Burmah Shell Oil Storage & Distributing Co. of India Ltd., Burmah Shell House, Ballard Estate, *Bombay-1.*
- 132. Esso Standard Eastern Inci., Esso Building, 17, Jamshedji Tata Road, *Bombay-1.*
- 133. Dewanchand Ramsaran, 15, P. Demello Road, Shroff Bhavan, *Bombay-9.*
- 134. Harsai Hardas & Co., Kanshiram Jamnadas Building, 5, P. Demello Road, *Bombay-9.*
- 135. Manoharlal Santaram, Hatim Manzil, 149, P D' mellow Road, Carnac Bunder, *Bombay-1.*
- 136. M. K. J. & Co., 17, Frere Road, Wadibunder, *Bombay-9.*

137. Santhram & Sons, Sholapur Street, Wadibunder, *Bombay-9.*
138. N. G. Kapaleshwar & Co., Reay Road, Opposite Dockyard Station, *Bombay-10.*
139. Chunilal Gupta Syndicate, Clive Road, Wadibunder, *Bombay-9.*
140. Ishardas & Sons, Opposite Dockyard Railway Station, *Bombay-10.*
141. Mack Transport Company, Shroff Bhavan, P. D'mello Road, Carnac Bunder, *Bombay-1.*
142. Tapse B. Pandey & Co., Laxmi Building, Shivaji Chowk, *Kalyan.*
- *143. H. Butani & Co., Shroff Bhavan, P. D'Mello Road, Opp. Carnac Bunder, *Bombay-1.*
- *144. The Model Co-operative Transport Society Ltd, Mehrauli Road, *Gurgaon.*
- *145. Sree Neelakanteswana Swamy Motor Service, *Yenimlganur*, (Kurnool Distt.)
146. South Sattara Transport Co-operation Consumers Society Ltd., 73-A, Vakhar Bagh, *Sangli.*
147. West Khandesh Motor Union Co-operative Society Ltd., *Dhulia.*
148. Latur Motor Goods Union, *Latur* (Distt. Osmanabad).
149. Motor Owners Transport Company, Shaniwar Peth, *Karad.*
150. Jalgaon District Transport Co-operative Consumers Society Ltd., 29, Polan Peth, *Jalgaon.* (E.K.)
151. Bombay Transport Co-operative Consumers Society Limited, Raichur Street, *Bombay-9.*
152. Bombay Lorry Operators Syndicate (Regd.), 65/67, Akbar Manzil, Janjekar Street, *Bombay-3.*
153. Poona District Transport Co-operative Society Ltd., 125, Shukarwar Peth, *Poona-2.*
154. Nagpur Goods Transport Union, Africa House, Gandhibagh, *Nagpur-2.*
155. Sholapur Lorry Operators Syndicate (Regd.), Tuljapur Ves, *Sholapur.*
156. Sangli Motor Malak Sangh, Sewani Road, *Sangli.*
157. Sattara Transport Sahakari Society Ltd., 677/78, Gurwar Peth, *Sattara.*
158. Adarash Taxi Owners Co-operative Society Ltd., 13/579 Punjabi Colony, Sion Kolwada, *Bombay-22.*
159. Nasik City Lorry Owners Co-operative Society Ltd., Malegaon, Stand, Panchvati, *Nasik.*
160. Maharashtra Lorry Operators Association, 125, Shukarwar Peth, *Poona.*

- *161. Kolhapur Motor Transport Producers' and Consumers' Co-operative Society Ltd., 1298 'C' Ward, Laxmipuri, *Kolhapur*.
- 162. Sholapur Transport Co-operative Consumers Society Ltd., 248, West Mangalwar Peth, *Sholapur*.

D. CONSUMERS' ASSOCIATIONS.

- *1. Federation of Indian Automobile Associations, 76, Veer Nariman Road, Church-gate, *Bombay-1*.
- *2. The Western India Automobile Association, Lalji Naranji Memorial Building, Churchgate Reclamation, *Bombay-1*.
- *3. Automobile Association of Southern India, 38-A, Mount Road, Post Box. 729, *Madras-6*.
- *4. Automobile Association of Eastern India, 13, Ballygunge Circular Road, *Calcutta-19*.
- 5. The Automobile Association of Upper India, 14-F, Connaught Place, Lilaram Building, *New Delhi*.
- @6. The U.P. Automobile Association, 32-A, Mahatma Gandhi Marg., *Allahabad*.
- *7. The Executive Officer, The Association of State Road Transport Undertakings, J-17, Jangpura Extension, *New Delhi-14*.
- *8. The Secretary, Indian Roads and Transport Development Association, 27, Bastion Road, *Bombay-1*.
- *9. All India Motor Union Congress, 16-A, Asaf Ali Road, *New Delhi-1*.
- *10. Federation of Bombay Motor Transport Operators Ltd., 26, Frere Road, Wadi Bunder, *Bombay-9*.
- @11. Indian Institute of Road Transport, Best House, Post Box No. 192, *Bombay-1*.
- *12. Andhra Motor Union Congress, 4-3-349, Bank Street, Sultan Bazar, *Hyderabad*.

E. TAXI ASSOCIATIONS.

- 1. Bombay Taxi Association, Kennedy Bridge, *Bombay-4*.
- 2. Greater Bombay Taxi Association, French Bridge, Chowpati, *Bombay-7*.
- 3. Bombay Taximen's Union, 235, D'Mello Road, Fort, *Bombay-1*.
- 4. Maharashtra Taximens' Guild, Jinnha Hall, Congress House, *Bombay-4*.
- 5. Poona Taxi-drivers' Union, 24, Narayan Peth, *Poona*.
- 6. Calcutta Taxi Association, 157-B, Bharantalla Street, *Calcutta-13*.
- 7. Vahan and Bahak Co-operative Society, Khansa Chowky, Jamalpur, *Ahmedabad*.
- 8. Delhi State Taxi Union, 225, Kamla Market, *New Delhi*.

F. AUTOMOBILE DEALERS.

1. S. M. Abdul Haw Sahib & Bros., Rangayyappa Rao Street, Post Box No. 52, *Vijayawada*.
2. Agarwal Automobiles, 2-A, Sardar Patel Marg., P.O. Box No. 8, *Allahabad*.
- *3. B. P. Agarwalla & Sons, Pvt. Ltd., P.O. Dhansar, Distt. *Dhanbad*.
4. Agencia E. Sequeira, Post Box No. 21, Campal, *Nova-Goa, Goa*.
5. Ahmedabad Motors Private Ltd., Lal Darwaza, *Ahmedabad*.
6. Andaman Enterprises, Port Blair, *Andamans*.
- *7. Arvind Motors, Balmatta Road, Post Box No. 48, *Mangalore-1*.
8. Ashok Automobiles, Main Road, *Ranchi*.
9. Ashok Motors, *Tezpur*.
- *10. Associated Indian Enterprises Pvt. Ltd., 206, Acharya Jagadish Bose Road, *Calcutta-17*.
- *11. Associated Indian Enterprises Pvt. Ltd., Fraser Road, *Patna-1*.
- *12. Auto Chenoy, 62/D, Sarojini Devi Road, *Secunderabad*.
13. Auto Distributors Ltd., 36, Chowringhee, *Calcutta-16*.
14. Auto Distributors Ltd., Exhibition Road, *Patna*.
15. Auto Fin Ltd., 8573, Rashtrapati Road, *Secunderabad*.
- *16. Auto Sales, Purshottam Das Tandon Road, *Allahabad*.
- *17. Auto Service, Vasco Da Gama, P. B. No. 39. *Goa*.
- *18. M. G. Automobiles, 15, 16, Patel Nagar, *Bellary-2*.
19. Automotive Manufacturers Private Ltd., Mirzapur Road, *Ahmedabad*.
- *20. Automotive Manufacturers' Private Ltd., 108, Bazar Ward, Kurla, *Bombay-70 AS*.
21. Automotive Manufacturers Private Ltd., 8571, Rashtrapati Road, *Secunderabad (A.P.)*.
- @22. Automotive Services, Tilak Road, *Poona-2*.
- *23. Bafna Motors, Nanded-Hyderabad Road, Post Box No. 49, *Nanded*.
24. Bagai Motor Service, 13B/2, Rajpur Road, *Dehra Dun*.
25. Bagai Motor Service, 82-84 Janpath, *New Delhi*.
26. Bahdur Motors, Railway Road, *Saharanpur*.
27. Balkrishna Nabshar Thakur, P.O. Box No. 52, Panjim, *GOA*.
- *28. Balwant Motors, 130, Civil Lines, *Bareilly*.
29. Baroda Automobiles Sales & Service, Indira Avenue Road near Viswamitri Bridge, Post Box No. 137, *Baroda*.

30. Bezwada Motors Stores, Post Box No. 84, Convent Street, *Vijayawada-1.*
31. Bharat Motors, Buxi Bazar, *Cuttack-1.*
32. Bhaurilal Bakliwal & Co., Imphal, *Manipur.*
- *33. Bhilai Motors, Utai Road, Dist. *Durg.*
- *34. Bhopal Motors Private Ltd., 1, Sultania Road, *Bhopal.*
35. Bihar Auto Agencies, Kumka., Santhal Parganas, *Bihar.*
- *36. Bombay Cycle & Motor Agency Ltd., 534, Sardar Vallabhbhai Patel Road, *Bombay-7.*
- *37. Bombay Garage (Poona) Private Ltd., 11, Elphinstone Road, *Poona-1.*
- *38. The Bombay Garage (Ahmedabad) Ltd., Shahibag Road, *Ahmedabad-4.*
39. The Bombay Garage (C.P.) Private Ltd., Kanoria House Palam Road, *Nagpur-1.*
- *40. The Bombay Garage Private Ltd., Meher Building, Chowpatty *Bombay-7.*
- *41. The Bombay Garage (Rajkot) Private Ltd., Gondal Road, *Rajkot.*
- *42. M. G. Brothers, Post Box No. 13, *Kurnool.*
43. Cama Motors Private Ltd., Lal Darwaza, *Ahmedabad.*
- *44. Canara Sales Corporation Ltd., Kodialbail, *Mangalore-3.*
45. Cargo Motors Private Ltd., National Highway, Gandhidham, *Kandla.*
46. Central Automobiles, P.O. Box No. 27, M.G. Road, *Raipur. (M.P.)*
47. Central India Motors, 19/1, Bombay-Agra Road, *Indore.*
48. Central Motors, Burhanpur Road, P.B. No. 6, *Khandwa.*
49. Commercial Motors, 55, Gandhi Road, Post Box No. 47, *Dehra Dun.*
50. Das Motors, Bridge Street, *Meerut.*
51. Dawar Brothers, Hamidia Road, *Bhopal.*
- *52. Delhi Automobiles Private Ltd., 3/15A Asaf Ali Road, *New Delhi.*
- *53. Delhi Motor & Cycle Co., 48, Janpath, *New Delhi.*
- *54. Devinder Motor Works, Badrinath Marg., Kotdwara, *Garkwal Dist. (U.P.).*
- *55. Dhanbad Automobiles Private Ltd., Dhanbad. (*Bihar*).
56. Dharam Singh (Motors) Private Ltd., 16, Station Road, *Lucknow.*
- *57. Doaba Automobiles, Court Road, Amritsar (*Punjab*).
58. Doon Motors Private Ltd., 65-A Rajpur Road, *Dehra Dun.*

59. Estern Motors Private Ltd., Assam Trunk Road, *Gauhati*.
- *60. Fairdeal Motors, Bombay-Agra Road, *Indore (M.P.)*.
61. Fairdeal Motors, Residency Road, *Srinagar*.
- *62. French Motor Car Co. Ltd., 9/11, Hughes Road, *Bombay-26*.
- *63. French Motor Car Co. Ltd., 234/3, Lower Circular Road, *Calcutta-20*.
- *64. French Motor Car Co. Ltd., Mule 5/6, G. S. Road, Post Box No. 122, *Gauhati*.
- *65. French Motor Car Co. Ltd., G. T. Road Ushagram, *Asansol*.
- *66. French Motor Car Co. Ltd., Seveke Road, *Silliguri*.
- *67. French Motor Car Co., Ltd., Laitumkhrah, *Shillong*.
- *68. French Motor Car Co. Ltd., South Amlapatty Road, P.O. Rehabari, *Dibrugarh*.
69. Ganesh Automobiles, Kutchery Road, *Ajmer*.
70. Garapati Garage 1959, Gandhinagar, *Vijayawada-3*.
71. R. Garnier & Co., 4, Rue Saint Laurent, *Pondicherry-1*.
- *72. General Auto Agencies, Imperial Road, *Ajmer*.
- *73. General Auto Agencies, Sir Mirza Ismail Road, *Jaipur*.
- *74. George Oakes Ltd., Sri Narsinharaja Square, *Bangalore-2*.
- *75. Ghatage & Patil, Rajaram Road, *Kolhapur-2. (Maharashtra State)*.
76. Globe Motors Ltd., Mirza Ismail Road, *Jaipur*.
77. Globe Motors Ltd., G.T. Road, *Jullundur*.
78. Globe Motors Ltd., 1/2, Jhandewalan, *New Delhi*.
- *79. Goenka Engineering Works, Keatinge Road, *Shillong*.
- *80. Gotadki Patil Automobile Co., Poona-Bangalore Road, *Belgaum*.
81. The Gounder & Co., 9/69, Jail Road, Post Box No. 512, *Coimbatore-1*.
82. Greenline Motors, Opp. Inspection Bungalow, Shivaji Nagar, *Belgaum*.
83. Highway Motors, G. T. Road, *Jullundur*.
84. Himatsinghka Auto Enterprises, North Lakhimpur Road, *Tezpur*.
85. Hind Motors, Sector 22C, *Chandigarh*.
86. Hindustan Auto Distributors, 17, Govt. Place East, *Calcutta-1*.
87. Hindustan Automobiles, P.O. Box No. 247, 97, The Mall, *Kanpur*.
88. Hirakud Motors, Post Box No. 53, *Sambalpur*.
- *89. India Automobiles (1960) Ltd., 12, Govt. Place East, *Calcutta-1*.
90. India Automobiles, Poona Bangalore Road, *Kolhapur*.

91. Indra Auto Sales Private Ltd., Laheri Gate, *Patiala*.
92. India Garage, Govt. Building, 34, Mount Road, *Madras-2*.
- *93. Ajanta Auto Centre, Nehru Stadium, Bombay-Agra Road, *Indore. (M.P.)*
- *94. India Garage, 18, St. Mark's Road, *Bangalore-1*.
95. Industry & Commerce Enterprises Private Ltd., Mahatab Road, *Cuttack-3*.
96. Jadwet Trading Co., Aberdeen, Port Blair, *Andaman & Nicobar Island*.
- *97. Jaidka Motor Co. Ltd., 129, Park Street, *Calcutta-16*.
98. Jaidka Motor Co. Ltd., Exhibition Road, *Patna*.
- *99. Jaika Motors Kingsway, Post Box No. 1, *Nagpur-1*.
100. P. S. Jain Motors, Grand Trunk Road, *Jullunder City*.
- *101. Jammu & Kashmir Motor Corporation, Palace Road, *Jammu. (Jammu & Kashmir State)*.
102. Jamshedpur Automobiles Private Ltd., Main Road, *Jamshedpur*.
- *103. S. G. Jayaraj Nadar & Sons, *Ammayanayakanur, Madurai, Dist. Madras State*.
104. S. G. Jayaraj Nadar & Sons, 176 B, Trivandrum Road, *Palayamkottai, Tirunelveli Dist.*
- *105. Jay Kay Automobiles (Private) Ltd., New Transport Yard, *Jammu Tawai, Jammu*.
- *106. Kallash Motors, G. T. Road, *Kanpur*.
107. Kalinga Automobiles, *Bhubaneshwar-1*.
108. Kamal & Co., Mirza Ismail Road, *Jaipur*.
109. Kamal & Co., Station Road, *Jodhpur*.
110. Karwa Brothers (Private) Ltd., Assam Trunk Road, *Jorhat*.
111. Kashmir Motors, National Highways, Sonwar, *Srinagar. (Kashmir)*.
112. Kasi & Sethu, Pidarikulam Road, *Kumbakonam*.
113. Kathiwar Motors, Post Box No. 206, Gondal Road, *Rajkot*.
- *114. Khubchand Sagarmal, Motor Stand, *Jalgaon*.
115. Kishore Transport, Cantonment Road, *Cuttack-1*.
- *116. Krishna Motor and Engineering Works, Post Box No. 25, Main Road, *Vizianagaram-2*.
117. Kulathunkal Motor Corporation, Post Box No. 49, *Trivandrum*.
118. Kumar Motors, Nainital Road, *Bareilly*.
119. Lakhia Brothers, Lal Darwaza *Ahmedabad*.
- *120. Lawly Sen and Co., "Lawlys Building", Exhibition Road, *Patna-1*.

121. Laxmi Motors, Seth M. V. Malvi Dharamsala Building, Station Road, *Surat*.
- *122. Maduri Motors, Bashir Bagh, Post Box No. 176, *Hyderabad*.
123. Mahavir Automobiles, Gunj Road, *Gulbarga (Mysore State)*.
- *124. Mañikar (Motors) Ltd., Post Box No. 9, Main Road, *Trivandrum-1*.
125. MD. Ekram Khan and Son, Ekram Building, *Varanasi Cantt.*
- *126. Metro Motors, The Motor House, Hughes Road, *Bombay-7*.
- *127. Metro Motors Private Ltd., No. 170/2-5, S. B. Road, *Ambala Cantt.*
128. Metro Motors (Kathiwar) Private Ltd., Gondal Road, *Rajkot*.
129. Mithila Motors Private Ltd., Kalambag Road, Post Box No. 5, *Muzaffarpur*.
130. D. R. Motors, Jeewan Colony, West Niwarganj, *Jabalpur*.
131. S. P. Motors, Post Box No. 83, Poona-Bangalore Road, West, Traffic Island, *Hubli*.
- *132. V. S. T. Motors Private Ltd., Govt. Building, 34, Mount Road, *Madras-2*.
- *133. Motor Sales, Opposite. Railway Station, Charbagh, *Lucknow*.
134. Motor Sales and Service, Lal Darwaza, *Ahmedabad*.
- *135. Narain Automobiles, 4, Shahnajaf Road, *Lucknow*.
- *136. Narcinva Damodar Naik, Post Box No. 43, *Margao. (Goa)*.
137. Narbheram & Co. (Private) Ltd., Post Box No. 7, Jamshedpur (*Singhbhum*).
- *138. National Automobiles, Hazrat Ganj, *Lucknow*.
- *139. National Garage, Prop: C. L. Gulhati & Sons Private Ltd., *Jammu*.
140. National Garage, Mount Road, *Nagpur*.
141. National Garage, Great Eastern Road, *Raipur*.
142. The National Garage Private Ltd., Bhulabhai Desai Road, *Bombay-26*.
- *143. Nav Bharat Automobiles, 49, Taj Road, *Agra Cantt.*
144. Nav Bharat Motor Agency, Railway Lines, *Sholapur*.
145. New India Motors (Private) Ltd., 154/155, Industrial Area, *Chandigarh*.
146. Niranjlanlal Ramchandra, 158, Partabpura, *Agra*.
147. Northern Motors Private Ltd., G. T. Road, *Juliundur City*.
148. Noshirwan & Co. (Private) Ltd., Bombay-Agra Road, *Indore*.
149. Orient Automobiles, P. O. Jugsalai, *Tatanagar*.

150. Oriental Automobiles, Hanuman Chowk, Latur (*Osmanabad St.*)
151. Pandyan Automobiles Private Ltd., 5, Scott Road, Post Box No. 200, *Madurai-1*.
152. Pathak Brothers, 647/5A, Napier Town, *Jabalpur*.
153. Patnaik and Co. (Private) Ltd., Cantonment Road, *Cuttuck*.
154. Patny and Co. Private Ltd., 87, Sarojini Devi Road, *Secunderabad*.
- *155. The Phoenix Automobile, Sales and Service (Private) Ltd., Dibrugarh (Dist. Lakhimpur), *Assam*.
156. Poddar Automobiles, 36, Chowringhee, *Calcutta-16*.
157. The Popular Automobiles Ltd., 4, McDonal's Road, *Tiruchirapalli*.
158. The Premier Garage, Lloyds Bridge, *Poona*.
- *159. Premier Motor Garage, 47, Industrial Area, *Chandigarh*.
- *160. Premier Motors (Private) Ltd., 56, Civil Lines, *Bareilly*.
- *161. Premier Motors (Private) Ltd., Post Box No. 57, *Lucknow*.
162. Premier Motors (Private) Ltd., Opp. Eye Hospital, Park Road, Civil Lines, *Gorakhpur*.
163. Premnath Motors (Raj.) Private Ltd., Khasa Kothi Road, *Jaipur*.
- *164. Premnath Motors Private Ltd., Scindia House, Curzon Road, *New Delhi-1*.
165. Progressive Motors Private Ltd., Exhibition Road, *Patna-1*.
- *166. Project Automobiles, Great Eastern Road, Post Box No. 30, *Bhilai-1 (M. P.)*.
- *167. Provincial Automobiles Co., Post Box No. 7, King's Way, *Nagpur-1*.
- *168. Punjab Auto Enterprises, The Mall, *Patiala*.
169. Pushpa Motors, Props: Lodha Corporation (Private) Ltd., Kanwa Road, *Kotah (Rajasthan)*.
170. Rajasthan Motors, Bhagwati Bhawan, Mirza Ismail Road, *Jaipur*.
171. Raj Motors, Grand Trunk Road, Near Ice Factory, *M. Lout (Ferozepur Distt.)*.
- *172. Rajputana Automobiles, Mahatma Gandhi Road, *Ajmer (Rajasthan)*.
- *173. Rama Yeswant Naik & Sons, Ramsons Motor House. P.B. No. 17, Margao, *Goa*.
174. Sri Ramdas Motor Transport (Private) Ltd., Subhash Road, Post Box No. 42, *Kakinada*.
- *175. Rao & Rao, Maidan Road, *Mangalore-1*.

176. Rashmi Motors, Nagmatia House, *Gaya*.
- *177. Reliance Motor Co. Private Ltd., 151, Mount Road, *Madras-2*.
- *178. Sah and Sanghi, 'Giri Kunj', 11-C, Hughes Road, *Bombay-7*.
179. Sainiks Motors, Post Box No. 28, Sojati Gate, *Jodhpur*.
180. Sakthi Automobiles, B. C. Trust Building, Post Box No. 9, Jail Road, East Palayam, *Calicut-2*.
181. Saligram and Co., Post Box No. 27, *Dibrugarh*.
- *182. Sanghi Bros. (Indore) Private Ltd., 6, Manoramagunj, Bombay-Agra Road, *Indore City (M. P.)*.
- *183. Sanghi Motors, Link Road, 1/4E, Jhandewalan, *New Delhi-1*.
- *184. Sanghi Motors (Bombay) Private Ltd., 39A, Hughes Road, *Bombay-7*.
185. Sarosh Motor Works, King's Road, *Ahmednagar*.
186. Satish Motors Private Ltd., Jalna-Bombay Road, Post Box No. 54, *Aurangabad*.
- *187. B. Seshagiri Rao & Sons, Post Box No. 14, Raja Rangayyaparao Street, *Vijaywada-1*.
188. Shah Auto Engineering Co., Rashtrapathi Road, *Secunderabad*.
- *189. A. R. A. Shenbaga Nadar and P. V. P. Valasubramania Nadar & Co., Palayamkottai, *Tirunelveli-2*.
- *190. A. R. A. Shenbaga Nadar and P. V. P. Valasubramania Nadar, 38, T. P. K. Road, *Madurai-1*.
191. Sikand and Co., 110, Alexandra Road, *Ambala Cantt.*
- *192. Sikand and Co., *Dhalli (Near Simla)*.
- *193. Sikand and Co., 50, Janpath, *New Delhi-1*.
194. Silchar Automobiles, *Silchar*.
- @195. Silver Jubilee Motors Private Ltd., 12, Moledina Road, *Poona*.
- *196. South India Automotive Corporation Private Ltd., 24, White Road, *Madras-14*.
- *197. Southern Motors, Post Box No. 19, 18, St. Mark's Road, *Bangalore-1*.
- *198. Speed Motors Private Ltd., 3, Shahanajaf Road, *Lucknow*.
- *199. Stanes Motors (South India) Ltd., Post Box No. 204, 6/23-24, Race Course Road, *Coimbatore*.
200. Sterling Motors, Bombay-Agra Road, Post Box No. 35, *Nasik*.
- *201. T. V. Sundram Iyengar and Sons (Private) Ltd., Post Box No. 21, T. V. S. Building, West Veli Street, *Madurai*.
- *202. T. V. Sundaram Iyengar and Sons (Private) Ltd., Chettikulangara, Vanchiyoor, *Trivandrum*.

- *203. Sundaram Motors (Private) Ltd., 2/2A, Kasturba Road, *Bangalore-1.*
- *204. Sundaram Motors (Private) Ltd., 37, Mount Road, *Madras-6.*
- *205. Supreme Motors Private Ltd., B 13/3, Asaf Ali Road, *New Delhi-1.*
- 206. Surjit Motors Private Ltd., Bombay-Agra Road, *Dbulia.*
- 207. Staw-Lue Services, 14, Residency Road, *Bangalore-25.*
- 208. Tiwari Bechar and Co. Private Ltd., Post Box No. 20, *Jamshedpur.*
- 209. Tribeni Motor Car Co., 23, Kanpur Road, *Allahabad.*
- 210. Unicorn Bangalore Private Ltd., 8, Brigade Road, *Bangalore.*
- *211. Union Co. (Motors) Private Ltd., 39, Mount Road, *Madras-2.*
- *212. Union Company (Motors) Private Ltd., Garden Road, *Ootacamund.*
- *213. Union Motors, Ganshala Road, Sriganganagar (*Rajasthan*).
- 214. United Motors of Rajasthan, Opp. Khalsa Kothi, *Jaipur.*
- *215. United Motors India Ltd., 39, Hughes Road, *Bombay-7.*
- 216. The United Trading Corporation and Workshop (Private) Ltd., Attavar, Nandigudde Road, *Mangalore-1.*
- 217. Utkal Automobiles (Private) Ltd., Post Box No. 50, Ring Road, *Rourkela-1.*
- *218. Vikram Motors 15/198, Vikramjit Singh Road, *Kanpur.*
- 219. Vinod Motors Private Ltd., Agra Road, *Indore.*
- 220. P. G. Virgincar and Companhia, Pracade Jorge Bareto Post Box No. 38, Margao, *Goa.*
- 221. Visnum V. Kamat Tarcar, Afonso de Albuguerque, Post Box No. 16, Panjim, *Goa.*
- 222. P. H. Wadia and Sons, Rajkumar College Road, *Rajkot.*
- *223. Walford Transport Ltd., 71, Park Street, *Calcutta-16.*
- *224. Walford Transport Ltd., Mankatta Road, P.O. Rehabari, *Dibrugarh.*
- *225. Walford Transport Ltd., Sevak Road, *Siliguri.*
- 226. Wasan Automobiles, Agra Road, Post Box No. 23, *Nasik.*
- *227. Webb's Sales and Service Private Ltd., 26, Mahatma Gandhi Road, *Bangalore-1.*
- 228. Western India States Motors, Mirza Ismail Road, *Jaipur.*
- 229. Western Indian States Motors Private Ltd., Railway Road, *Jodhpur.*
- 230. Western Motors, Post Box No. 50, *Rajkot.*
- 231. The Western India Motor Car Co., Opp. Radio Station, *Baroda.*

232. J. William & Co., 2422, East Street, *Poona-1*.
233. R. I. Works, Kingsway, *Nagpur-1*.
234. R. I. Works, Opp. Gas Memorial, Mohdapara, *Raipur*.
235. The Motor Sales Co., *Anantapur*.
236. Kalpana Motors, Station Road, *Anand (Gujarat State)*.
- @237. Dhoot Agencies, 1136, Court Road, *Aurangabad*.
238. The Ram Agency, Tilak Road, *Poona*.
239. Delhi Garage Private Ltd., Connaught Circus, *New Delhi*.
240. The New India Motors Private Ltd., Scindia House, *New Delhi*.
241. Agarwal Brothers, The Mall, *Kanpur*.
- *242. Ramchandra Brijmandan, 158, Partabpura, *Agra-1*.
243. M/s. T. N. Raghunatha Reddy, Post Box No. 1, Madanapalle P. O., *Chittor Dist. (A. P.)*.
244. M/s. Balkrishna Narahar Thakur, Ruade Ormuz, Post Box No. 52, *Panjim, Goa*.
- *245. Dadajee Dhackjee and Co. Private Ltd., "Shree Pant Bhavan", Sandhrust Bridge, *Bombay-7*.
- *246. The Allied Motors Private Ltd., Hazrat Ganj, *Lucknow*.
247. The British Motor Car Co. (1934) Private Ltd., Connaught Place, *New Delhi*.
248. Instalment Supply Private Ltd., Janpath, *New Delhi*.
249. Standard Service Station, B. Block, Connagutht Place, *New Delhi*.
- *250. India Motor Corporation (Private) Ltd., The Mall, *Kanpur*.
- *251. Shree Gopal Motors, The Mall, *Agra (U.P.)*.
252. Jagannath Dudadhar, G. T. Road, *Aligarh*.
- *253. Commercial Motors, Hazratganj, *Lucknow*.
254. K. T. Automobiles, Hazratganj, *Lucknow*.
- *255. Motor Cycle House, 11 & 12, Station Road, *Lucknow*.
256. Trilok Singh Co., Ashoka Marg, *Lucknow*.
- *257. Bengal Auto Distributors, 25-B, Park Street, *Calcutta-16*.
258. Associated Automobiles Private Ltd., Post Box No. 128, *Coimbatore*.
259. Khivraj Motors, Private Ltd., 123, Mount Road, *Madras-6*.
260. Asian Trading Co., Lalbagh, *Lucknow*.
261. Ganesh Das Ram Gopal, Halwasiva Court, Hazratganj, *Lucknow*.
262. Oriental Motor Car Co., Hazratganj, *Lucknow*.
263. United Motors, Abbott Road, *Lucknow*.
264. Austin Distributors Private Ltd., 19, Chowringhee Road, *Calcutta*.

265. Bhandari and Sons, Bhandari Building, *Kharagpur*.
266. G. Mckenzie & Co. (1919) Private Ltd., 24-B. Park Street, *Calcutta-16*.
267. C. C. Automobiles Ltd., "Lakshmi Bldg.", Bank Road, *Calicut-1*
- @268. Jullunder Motor Agency (Delhi) Private Ltd., Kashmere Gate, *Delhi-6*.
- @269. Madras Motors Private Ltd., 36/C-Mount Road, *Madras-6*.
270. Maganty Motors, Post Box No. 130, *Guntur*.
271. Raman and Raman Private Ltd., Post Box No. 22, *Kumbakonam*.
272. Gita Automobiles, Town Hall Road, *Calicut*.
- *273. Sri Pattabhirama, Commercial Syndicate, Vallabhai Street, *Kakinada (A.P.)*.
274. P. V. Pai & Co., Mission Street, *Mangalore-1*.
275. Gupta and Sons, 357, Jawahar Marg, *Indore*.
276. Rajputhana Motors, 13, Maharani Road, *Indore*.
277. Chakrapani Chetty (G. N.) & Sons, Tamil Sangam Road, *Madurai*.
278. Popular Automobiles Ltd., Post Box No. 18, *Tiruchi-1*.
- *279. Trichy Everest Automobiles Private Ltd., 4-A, Birds Road, *Tiruchirapalli Cantt-1 (South India)*.
280. J. J. Industrial Corporation, 25-B, Park Street, *Calcutta-16*.
281. Auto Cars (Hissar), Opp. Elite Cinema, *Hissar, Punjab*.
282. Delhi Automobiles Private Ltd., 117, Alexandra Road, *Ambala Cantt*.
283. Rajesh Motors, Patni Bhavan, Gandhi Baugh, *Nagpur-2*.
284. Fairdeal Automobiles Private Ltd., Main Road, *Jamshedp r*.
285. Bajaj Auto Limited, Wakadewadi, *Poona-2*.
- *286. Nancy Automobiles, Main Road, *Rourkela-1 (Orissa)*.

G. AUTOMOBILE DEALERS' ASSOCIATIONS

- *1. The Automobile Dealers Association of Western India, C/o Bombay Chamber of Commerce and Industry, Meckinnon Meckenzie Building, Ballard Road, Ballard Estate, *Bombay-1*.
- *2. The Motor Industries Association, Royal Exchange, *Calcutta*.
- *3. The Automobile Traders Association Delhi, 12, Scindia House (Curzon Road), *New Delhi-1*.
- *4. The Motor Vehicles and Allied Industries Association, 22, Edward Elliotts Road, *Madras-4*.
5. U. P. Motor Industries Association, C/o Motor Sales, Charbagh, *Lucknow*.

- *6. Federation of Automobile Dealers Associations, 534, Sardar Vallabhbhai Patel Road, *Bombay-7*.
- *7. Federation of All India Automobile Spare Parts Dealer's Associations, 3620/21, Netaji Subhas Marg, Darya Ganj (Faiz Bazar), Post Box No. 1052, *Delhi-6*.
- 8. Indore Automobile Dealer's Associations, C/o The Fair Deal Motors, Bombay-Agra Road, *Indore*.
- 9. The Bombay Motor Merchants' Association Ltd., Sandhurst Bridge, Sukh Sagar, 3rd Floor, *Bombay-7*.
- *10. Calcutta Motor Dealers' Association, 16, Rajendranath Mukherji Road, *Calcutta-1*.
- 11. Delhi Motor Trader's Association, Piarelal Motor Market, Kashmere Gate, *Delhi-6*.
- *12. Madras Motor Parts Dealers' Association, 22, General Patters Road, Mount Road, *Madras-2*.
- @13. Jullundur Motor Parts and Traders' Association, C/o. British Motor Car Co. (1934) Private Ltd., G. T. Road, *Jullundur City*.
- 14. The Rajasthan Automobile Dealers' Association (Regd.), Mirza Ismail Road, Jaipur. (*Rajasthan*).
- 15. Bhopal Automobile Merchants' Association, Hamidia Road, *Bhopal*.
- 16. Tamilnad Motor Parts Dealers' Association, 25, Naicker New Street, *Madurai-1*.
- *17. Mysore Automobile Parts and Allied Merchants' Association, 17, Ramakrishna Building, Narsimharaja Road, *Bangalore-2*.
- @18. Vijayawada Motor Merchants' Association, Prakasam Road, Governorpet, *Vijayawada-2*.
- @19. U. P. Motor Industries Association, C/o Commercial Motors Private Ltd., 11, Hazrat Ganj, *Lucknow*.
- 20. Gwalior Automobile Dealers' Association, C/o Jain Motors, Jayendra Ganj, Lashkar, *Gwalior*.
- *21. The Maharashtra Motor Parts Dealers' Association Ltd., Powell's Bldg., 431, Lamington Road, *Bombay-4*.
- 22. The Automobile Dealers' Association, C/o Agarwal Brothers, 63/2, The Mall, *Kanpur*.
- 23. All Kerala Spare Parts Dealers' Association, Umalayam, Mannadiar Lane, *Trichur-1*.
- @24. Varanasi Auto Dealers' Association, Thapar House, *Varanasi Cantt.*
- @25. The Andhra Pradesh Automobile Dealers' Association, 484, Subhash Nagar, *Hyderabad*.

H. RAW MATERIALS SUPPLIERS

- *1. Guest Keen, Williams Ltd., Post Box No. 609, *Calcutta-16.*
- 2. Mahindra Ugin Steel Co. Ltd., Gateway Building, Appollo Bunder, *Bombay-1.*
- *3. Fifth Sterling Steel Co. of India Ltd., Thana Industrial Area, Wagle Estate, *Thana.*
- @4. K. T. Rolling Mills (Private) Ltd., Broach Street, *Bombay.*
- *5. All Steel Industries Corporation Ltd., Post Box No. 530, *Coimbatore-81.*
- 6. Textile Machinery Corporation Ltd., 15, India Exchange Place, *Calcutta.*
- *7. Hindustan Steels Ltd., *Durgapur.*
- *8. Mysore Iron and Steel Ltd., *Bhadravati.*
- 9. Birla Gwalior (Private) Ltd., 15, India Exchange Place, *Calcutta-1.*
- 10. Mukand Iron and Steel Works, Kurla, *Bombay.*
- *11. Tata Iron and Steel Co. Ltd., *Jamshedpur.*

I. OIL COMPANIES

- *1. Burmah Shell Storage and Oil Distributing Co. of India Ltd., Ballard Estate, *Bombay-1.*
- *2. Caltex India Ltd., Caltex House, Ballard Estate, *Bombay-1.*
- *3. Esso Standard Eastern Corporation of India Ltd., Esso House, *Bombay-1.*
- *4. Indian Oil Corporation, 254 C, Dr. Annie Besant Street, Worli, *Bombay-18.*
- 5. Indo-Burma Petroleum Co. Ltd., Allahabad Bank Building, Apollo Street, *Bombay-1.*

J. PUBLIC SECTOR UNDERTAKINGS

- 1. Chairmen, Hindustan Steel Limited, P. O. Hinoo. (*Ranchi*).
- 2. Managing Director, Bokaro Steel Limited, 1, Lower Circular Road, *Calcutta.*
- *3. Chairman and Managing Director, Heavy Electricals (India) Ltd., *Bhopal.*
- *4. Chairman, Bharat Heavy Electricals Ltd., 5, Parliament Street, *New Delhi-1.*
- *5. Chairman, Heavy Engineering Corporation Ltd., *Ranchi.*
- *6. Managing Director, National Coal Development Corporation Ltd., *Ranchi (Bihar).*
- 7. Managing Director, Hindustan Salts Limited, P. O. Box No. 146, *Jaipur.*

- *8. Managing Director, Hindustan Insecticides Limited, C-255, Defence Colony, *New Delhi-3.*
- *9. Managing Director, National Instruments Limited, 1/1, Raja Subodh Chandra Mallik Road, Jadavpur, *Calcutta.*
- *10. Managing Director, 8A, Praga Tools Ltd., 6-6-8/39, Kavadi-guda Road, Post Box No. 70, *Secunderabad.*
- *11. Managing Director, National Newsprint & Paper Mills Ltd., *Nepanagar (Madhya Pradesh).*
- *12. Managing Director, Hindustan Machine Tools Limited, P.O. HMT, *Bangalore-31.*
- *13. Chairman & Managing Director, Fertilizer Corporation of India Ltd., D-15, South Extn. Area, 11, Ring Road, *New Delhi-16.*
- *14. Managing Director, fertilizers & Chemicals, Travancore Ltd., P.O. Udyogmandal, *Alwaye (Kerala State).*
- *15. Managing Director, Hindustan Teleprinters Ltd., G.S.T. Road, Guindy *Madras-32.*
- *16. Managing Director, Indian Telephone Industries Ltd., Dura-vani Nagar, *Bangalore-16.*
- *17. Managing Director, Indian Drugs & Pharmaceuticals Ltd., 5, Parliament Street, N. I. Buildings, *New Delhi-1.*
- *18. Managing Director, National Industrial Development Corp'n. Ltd., Udyog Bhavan, Maulana Azad Road, *New Delhi-11.*
- *19. Managing Director, Hindustan Antibiotics Limited, Pimpri, *Poona-18.*
- *20. Chairman, Neyveli Lignite Corporation Ltd., P.O. Neyveli, South Arcot Dist. (*Madras State*).
- *21. Chairman, National Mineral Development Corporation, Ltd., N.I.T., *Faridabad.*
- 22. Chairman & Managing Director, Hindustan Organic Chemicals, Ltd., 63, Jorbagh, *New Delhi.*
- *23. Managing Director, Hindustan Photo Films Manufacturing Co. Ltd., Indu Nagar P.O., *Ootacamund.*
- *24. Chairman, National Small Industries Corporation Ltd., Near Industrial Estate, Okhla, *New Delhi-20.*
- 25. Managing Director, Rehabilitation Industries Corporation, 25, Free School Street, *Calcutta.*
- 26. Managing Director, Hindustan Cable Limited, P.O. Hindustan Cables, Dist. Burdwan, (Rupnarampur Rly. Station), *West Bengal.*
- *27. Managing Director, Bharat Electronics Limited, Jalahalli P.O., *Bangalore-13.*
- 28. Managing Director, Garden Reach Workshops Limited, 43/43, Garden Reach Road, *Calcutta.*

- *29. Managing Director, Pyrites & Chemicals Development Company Ltd., Dehri-on-Sone, Dist. *Shahabad (Bihar)*.
- *30. Managing Director, Export Credit & Guarantee Corporation Ltd., 4, Rampart Row, *Bombay-1 (B.R.)*.
- *31. Managing Director, Indian Rare Earths Limited, Pil Court, 111, Queen's Road, *Bombay-1*.
- 32. Executive Director, Handicrafts & Handlooms Exports Corporation of India Ltd., Lok Kalyan Bhawan, 11-A, Rouse Avenue Lane, *New Delhi*.
- *33. Executive Director, National Research Development Corporation of India, Mandi House, Lytton Road, *New Delhi*.
- 34. Managing Director, Cochin Refineries Ltd., Post Box No. 501, *Ernakulam (Kerala)*.
- *35. Chairman, Industrial Finance Corporation of India, Burmah-Shell House (Annexe II), Connaught Circus, *New Delhi*.
- *36. Managing Director, Hindustan Aeronautics Limited, Indian Express Building, Vidhana Vadh, *Bangalore-1*.
- *37. General Manager, Instrumentation Limited, Kota-Jhalawar Road, *Kota (Rajasthan)*.
- *38. Chairman, Oil and Natural Gas Commission, Tel Bhavan, *Dehra Dun*.
- *39. Managing Director, Cement Corporation of India Ltd., National Herald Building, 5-A, Bahadur Shah Zafar Marg, *New Delhi-1*.
- *40. Managing Director, Mining and Allied Machinery Corporation, P.O. Durgapur-60, Dist. *Burdwan, West Bengal*.
- 41. Managing Director, Bharat Earth Movers Ltd., Hindustan Aircraft, P.O., *Bangalore-17*.
- 42. Sambhar Salts Ltd., Post Box No. 146, *Jaipur (Rajasthan)*.
- *43. Chairman, Bharat Aluminium Co. Ltd., C-29, New Delhi South Extension, Part II, Ring Road, *New Delhi-16*.
- *44. Managing Director, Hindustan Zinc Ltd., 11/221, Hospital Road, *Udaipur (Rajasthan)*.

K. CENTRAL GOVERNMENT DEPARTMENTS

- *1. Director General of Technical Development (Automobiles) Udyog Bhavan, Maulana Azad Road, *New Delhi*.
- *2. Secretary to the Government of India, Ministry of Industrial Development and Company Affairs, *New Delhi*.
- *3. Secretary to the Government of India, Ministry of Transport (Transport Wing), *New Delhi*.
- *4. Secretary to the Government of India, Ministry of Transport (Road Wing), *New Delhi*.
- *5. Chief Controller of Imports and Exports, *New Delhi*.

- *6. Director General of Supplies and Disposal, *New Delhi*.
- 7. Secretary, Central Mechanical Engineering Research Institute, *Durgapur*.
- *8. Indian Standards Institution, *New Delhi*.
- *9. Collector of Customs, *Bombay*.
- *10. Collector of Customs, *Calcutta*.
- *11. Collector of Customs, *Cochin*.
- *12. Collector of Customs, *Madras*.
- *13. National Test House, *Alipore*.
- *14. National Metallurgical Laboratory, *Jamshedpur*.
- *15. Indian Institute of Science, *Bangalore*.
- *16. Collector of Central Excise, Post Box No. 806, *Bombay-1*.
- *17. Controller of Motors and Commercial Vehicles, Ministry of Industrial Development and Company Affairs, Dept. of Industrial Development, *New Delhi*.

L. EMBASSIES OF INDIA

- *1. Minister (Economic), High Commission of India in U.K., Aldwych, London, *W.C.2. (U.K.)*.
- *2. First Secretary (Commercial), Embassy of India, No. 2, Rue Godet de Manroy, *Paris-9-0. (France)*.
- *3. First Secretary (Commercial), Embassy of India, Via Francisco, Denze, 36, *Rome. (Italy)*.
- *4. Counsellor (Commercial), 262, Koblenzstrasse, *Bonn (West Germany)*.
- *5. First Secretary (Commercial), Embassy of India, 585, Avenue Lausie, *Brussels (Belgium)*.
- *6. Commercial Secretary, Embassy of India, Vastra Tragardsgaten 15, *Stockholm C. (Sweden)*.
- *7. First Secretary (Commercial), Embassy of India, 2107, Massachusetts Avenue, *N.W. Washington 8D/C. (U.S.A.)*.
- 8. Second Secretary (Commercial), High Commission of India, 200, Maclaren Street, *Ottawa-4. (Canada)*.
- *9. Indian Trade Commissioner, Caltex House, 10th Floor, 167-187, Kent Street, *Sydney (Australia)*.
- *10. Counsellor (Commercial), Embassy of India, Post Box 475, *Cairo. (Egypt)*.
- *11. First Secretary (Commercial), Embassy of India, Naigai Bldg., No. 18, 2, Chome, Marunouchi Chiyoda-Ku, *Tokyo. (Japan)*.
- *12. Second Secretary (Commercial), High Commission of India in Pakistan, *Islamabad (Pakistan)*.
- *13. The Ambassador of India, Embassy of India, Rua-Barao-de, Flamengo, 22, Aptos 801-802, *Rio de Janeiro, (Brazil)*.

14. First Secretary (Commercial) to the High Commission for India in Ceylon, Nacaraja Building, Kollupitiya Station Road, *Colombo-3*.
- *15. First Secretary (Commercial), Embassy of India, No. 6 and 8, Ulitee Obubha, *Moscow (U.S.S.R.)*.
- *16. Second Secretary (Commercial), Embassy of India, 22, Thou-no Vaska, *Prague III (Czechoslovakia)*.
17. First Secretary (Commercial), Embassy of India, Proleterskeh, Brigade, 9, *Belgrade, (Yugoslavia)*.

M. STATE GOVERNMENTS

- *1. The Chief Secretary to the Government of Andhra Pradesh, *Hyderabad*.
- *2. The Chief Secretary to the Government of Assam, *Shillong*.
- *3. The Chief Secretary to the Government of Bihar, *Patna*.
- *4. The Chief Secretary to the Government of West Bengal, *Calcutta*.
- *5. The Chief Secretary to the Government of Gujarat, *Ahmedabad*.
6. The Chief Secretary to the Government of Jammu and Kashmir, *Srinagar*.
- *7. The Chief Secretary to the Government of Kerala, *Trivandrum*.
- *8. The Chief Secretary to the Government of Madhya Pradesh, *Bhopal*.
- *9. The Chief Secretary to the Government of Madras, *Madras*.
- *10. The Chief Secretary to the Government of Maharashtra, *Bombay*.
- *11. The Chief Secretary to the Government of Mysore, *Bangalore*.
12. The Chief Secretary to the Government of Orissa, *Bhubaneswar*.
- *13. The Chief Secretary to the Government of Punjab, *Chandigarh*.
14. The Chief Secretary to the Government of Rajasthan, *Jaipur*.
- *15. The Chief Secretary to the Government of Uttar Pradesh, *Lucknow*.
16. The Chief Commissioner, Delhi Administration, *Delhi*.
- *17. The Chief Commissioner, Himachal Pradesh, *Simla*.

N. DIRECTORS OF INDUSTRIES OF STATE GOVERNMENT

1. The Director of Industries, Government of Andhra Pradesh, *Hyderabad*.
2. The Director of Industries, Government of Assam, *Shillong*.
3. The Director of Industries, Government of Bihar, *Patna*.

- *4. The Director of Industries, Government of West Bengal *Calcutta*.
- *5. The Director of Industries, Government of Gujarat, *Ahmedabad*.
- 6. The Director of Industries, Government of Jammu & Kashmir, *Srinagar*.
- *7. The Director of Industries, Government of Kerala, *Trinandrum*.
- 8. The Director of Industries, Government of Madhya Pradesh, *Bhopal*.
- *9. The Director of Industries, Government of Madras, *Madras*.
- *10. The Director of Industries, Government of Maharashtra, *Bombay*.
- *11. The Director of Industries, Government of Mysore, *Bangalore*.
- 12. The Director of Industries, Government of Orissa, *Bhubaneswar*.
- 13. The Director of Industries, Government of Punjab, *Chandigarh*.
- 14. The Director of Industries, Government of Rajasthan, *Jaipur*.
- 15. The Director of Industries, Government of Uttar Pradesh, *Lucknow*.
- 16. The Director of Industries, Delhi Administration, *Delhi*.
- *17. The Director of Industries, Government of Himachal Pradesh, *Simla*.

O. POLICE DEPARTMENTS

- *1. Commissioner of Police, Greater Bombay, *Bombay*.
- *2. Inspector General of Police, *Delhi*.
- *3. Superintendent of Police, *Lucknow*.
- *4. Commissioner of Police, *Hyderabad*.
- 5. Commissioner of Police, *Calcutta*.
- 6. Commissioner of Police, *Madras*.
- 7. Commissioner of Police, *Kanpur*.
- 8. Commissioner of Police, *Bangalore*.

P. MUNICIPAL COMMISSIONERS

- *1. Municipal Commissioner, Municipal Corporation of Bombay, *Bombay*.
- 2. Municipal Commissioner, Municipal Corporation of Madras, *Madras*.
- 3. Municipal Commissioner, Municipal Corporation of Calcutta, *Calcutta*.

Q. OTHER DEPARTMENTS

- *1. State Trading Corporation of India Ltd., Indian Express Building, Mathura Road, *New Delhi*.
- *2. The Chief Officer, Department of Banking Operations, Reserve Bank of India, *Bombay*.
- 3. The Controller, Exchange Control Department, Reserve Bank of India, *Bombay-1*.

R. OTHERS

- *1. Indian Banks' Association, 17, Horniman Circle, *Bombay-1*.
- *2. Inventions Promotion Board, 39, Ring Road, *New Delhi-14*.
- *3. Insurance Association of India, 6, Rampart Row, *Bombay-1*.
- *4. Dr. F. P. Antia, I. B. M. World Trade Corporation, Vulcan Insurance Building, Veer Nariman Road, *Bombay-1*.



APPENDIX V

(Vide Paragraph 3.3)

Statement showing the visits of the Commission and its officers

Sl. No.	Name of the factory	By whom visited	Date of visit
1	Hindustan Motors Ltd., Uttarpara.	(i) Prof. K. T. Merchant, Member (ii) Shri A. K. Banerji, Cost Accounts Officer	21-9-1967 31-7-1967 to 28-8-1967
2	Premier Automobiles Ltd.		
	1. Kurla Plant	(i) Shri M. P. Pai, Chairman (ii) Shri M. Zaheer, Member (iii) Prof. K. T. Merchant, Member (iv) Shri N. Das, Technical Director (Engg. & Metallurgy) (v) Dr. N. V. A. Narasimham, Director (Investigation) (vi) Shri S. Ganesan, Research Officer (vii) Shri R. P. Brahma, Cost Accounts Officer	16-9-1966 16-9-1966 21-7-1966 23-9-1966 23-9-1966 3-8-1967 to 30-9-1967
	2. Kalyan plant	(i) Prof. K. T. Merchant, Member (ii) Shri N. Das, Technical Director (Engg. & Metallurgy) (iii) Shri S. K. Basu, Senior Cost Accounts Officer. (iv) Dr. N. V. A. Narasimham, Director (Investigation) (v) Shri S. Ganesan, Research Officer (i) Shri S. K. Basu, Senior Cost Accounts Officer	23-2-1967 23-2-1967 2-1-1967 23-9-1966 23-9-1966 16-1-1967
	3. Wadala plant		

Sl. No.	Name of the factory	By whom visited	Date of visit
3	Standard Motor Products of India Ltd., Madras.	(i) Prof. K. T. Merchant, Member . (ii) Shri S. K. Basu, Senior Cost Accounts Officer. (iii) Shri N. Das, Technical Director (E. & M.) (iv) Shri R. Visvanathan, Asstt. Cost Accounts Officer.	29-5-1967 14-10-1967 to 28-10-1967 29-5-1967 14-10-1966 to 29-10-1966 & 19-7-1967 to 11-8-1967.
4	Ashok Leyland Ltd., Madras	(i) Prof. K. T. Merchant, Member (ii) Shri N. Das, Technical Director (E. & M.) (iii) Shri S. K. Basu, Senior Cost Accounts Officer.	30-5-1967 30-5-1967 14-10-1966 to 28-10-1966 & 29-10-1967 to 4-11-1967.
5	Tata Engineering & Locomotive Co. Ltd., Jamshedpur.	(i) Prof. K. T. Merchant, Member (ii) Shri A. T. Mukherjee, Assistant Cost Accounts Officer. (Head Office, Bombay)	25-9-1967 and 26-9-1967 21-8-1967 to 26-8-1967 & 15-9-1967 to 23-9-1967.
6	Mahindra & Mahindra Ltd. 1. Ghatkopar plant	(i) Shri M. P. Pai, Chairman (ii) Prof. K. T. Merchant, Member . (iii) Shri N. Das, Technical Director (E. & M.) (iv) Shri S. R. Mallya, Cost Accounts Officer .	17-2-1967 17-2-1967 and 29-9-1967 September 1966 and August/September 1967.

APPENDIX VI

(Vide Paragraph 3.5.)

List of persons who attended the group discussions on 4th and 5th October, 1967 and the public inquiry on 6th and 7th October, 1967

I. GROUP DISCUSSIONS WITH PASSENGER CAR OWNERS ON 4-10-1967.

1. Mr. K. Rajgopaul, J. P., 9/45, Shyam Nivas, B. Desai Road, *Bombay-26.*
2. Mr. Dharamkumar B. Merchant, Managing Director, Dawlat Corporation Pvt. Ltd., Patel Chambers, French Bridge, *Bombay-7.*
3. Mr. Madhukar Vishnu Pandit, Office of the Deputy Director of Industries (Bombay Region), Old Customs House, Fort, *Bombay-1.*
4. Shri M. L. Bagri, Managing Director, Automat Engg. Pvt. Ltd., 14-A, Kurla Industrial Estate, Ghatkopar, Agra Road, *Bombay-77.*
5. Mrs. Lily A. Pandya, 60, Nepean Sea Road, *Bombay-6.*
6. Shri Burjor Rustomji Gobhai, 232, Dr. D. N. Road, *Bombay-1.*
7. Mr. Balkrishna N. Pittie, Flat No. 12, 'Palmera', Altamount Road, *Bombay-26.*
8. Shri S. G. Laud, Asstt. General Manager, Best Undertaking, Best House, *Bombay-1.*
9. Shri Satyendra Yeshwant Tipnis, Asstt. Director of Industries, C.S.P.O. Sachivalaya, *Bombay-32.*
10. Shri R. U. Shah, 325, Kalbadevi Road, *bombay-2.*
11. Shri A. E. Ghasletvala, and
12. Shri K. G. Subramanian, Western India Automobile Association Post Office Box No. 211, *Bombay-1.*
13. Dr. J. M. Rane, Dadajee Dhackjee & Co. Private Ltd., Sandhurst Bridge, *Bombay-7.*
14. Shri R. C. Purohit, *Bombay.*
15. Shri A. G. Haldipur, *Bombay.*

II. GROUP DISCUSSION WITH AUTOMOBILE DEALERS AND AUTOMOBILE DEALERS' ASSOCIATIONS ON 5-10-1967.

1. Shri R. R. Aiyer Represent- Federation of Automobile Dealers Associations, 534, Sardar Vallabhbhai Patel Road, *Bombay-7* and Walford Transport Ltd., 71, Park Street, *Calcutta-16.*

- | | | |
|--|--------------|---|
| 2. Shri T.S. Santhanam | Representing | Federation of Automobile Dealers Associations, and Sundaram Motors Private Ltd., 37, Mount Road, Madras-6. |
| 3. Shri N. K. Limji | „ | Federation of Automobile Dealers Associations, and T.V.S. Iyengar & Sons Private Ltd., TVS Building, West Veli Street, Post Box No. 21, Madurai. |
| 4. Dr. J. M. Rane | „ | Federation of Automobile Dealers Associations, and Dadajee Dhackjee & Co., Private Ltd., Sandhurst Bridge, Bombay-7. |
| 5. Shri R. Ramaswamy }
6. Shri S. Subramaniam } | „ | Federation of Automobile Dealers Associations. |
| 7. Shri A. Maiti | „ | The Motor Industries Association, Royal Exchange, S, Netaji Subhas Road, Calcutta-1 and Walford Transport Ltd. |
| 8. Shri R. K. Sanghi | „ | The Automobile Dealers Association of Western India, C/o Bombay Chamber of Commerce & Industry, Meckinnon Mackenzie Building, Ballard Road, Ballard Estate, Bombay-26. |
| 9. Shri M. K. Sanghi | „ | The Automobile Dealers Association of Western India and Sanghi Motors (Bombay) Private Ltd., 39A, Hughes Road, Bombay-7. |
| 10. Shri Mehendra Mathuradas. | „ | The Automobile Dealers Association of Western India and National Garage Pvt. Ltd., Bhulabhai Desai Road, Bombay-26. |
| 11. Shri R. N. Pillai | „ | The Motor Vehicles and Allied Industries Association, 22, Edward Elliotts Road, Madras-4, India Automotive Corporation Pvt. Ltd., 24, Whites Road, Madras-14 and Trichy Everest Automobiles Pvt. Ltd., 4-A, Bird's Road, Tiruchirappalli Cantt-1. |

12. Shri K. V. Srinivasan Representing The Motor Vehicles and Allied Industries Assocn., 22, Edward Ellits Road, Madras-4.
13. Shri A. K. Sanghi „ The Automobile Traders Association Delhi, Scindia House, New Delhi and Supreme Motors Pvt. Ltd., B 13/3 Asaf Ali Road, New Delhi.
14. Shri K. N. Menon „ The Automobile Traders Association Delhi and Premnath Motors Pvt. Ltd., Scindia House, New Delhi.
15. Shri P. Sharan Gupta }
16. Shri R. M. Rane } „
17. Shri K. B. Chandhoke }
18. Shri P. S. Chopra } Federation of All India Automobile Spare Parts Dealers' Associations, 3620/21, Netaji Subhash Marg, Darya Ganj (Faiz Bazar), Post Box No. 1052, Delhi-6.
19. Shri R.K. Sethi } „
20. Shri Behari Mehta }
21. Shri K. J. Doshi } The Maharashtra Motor Parts Dealers' Association Ltd., Powell Building, 2nd Floor, 431, Lamington Road, Bombay-4.
22. Shri P. K. Banaji „ Bombay Cycle and Motor Agency Ltd., 534, Sardar Vallabh-bhai Patel Road, Bombay-7.
23. Shri R. Ramachandra } „
24. Shri K. S. Subrama- } T. V. S. Iyengar & Sons Pvt. Ltd. niyan. TVS Building, West Veli Street, Post Box No. 21, Madurai.
25. Shri T. K. Seshadri } „
26. Shri T. A. Thiruvenka- } Sundaram Motors Private Ltd., tachary. 37, Mount Road, Madras-6.
27. Shri A. S. Rao „ Arvind Motors, Balmatta Road, Mangalore-1.
28. Shri Har Prasad „ Maduri Motors, Bashir Bagh Post Box No. 176, Hyderabad.
29. Shri S. H. Bhedwar „ Metro Motors, The Motor House Hughes Road, Bombay-7.
30. Mr. C. Duarte „ French Motor Car Co. Ltd., 9/11, Hughes Road, Bombay-26.

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| 31. Shri Arun Sanghi } | Represent-
ing | Sah & Sanghi, Giri Kunj, 11-C, |
| 32. Capt. S.P. Sanghi } | | Hughes Road, Bombay-7. |
| 33. Mr. R. D'Silva . | | „ Satish Motors Private Ltd., Post
Box No. 54, Bombay-Jalna
Road, Aurangabad (Maha-
rashtra). |
| 34. Shri S. Muthukrishnan | „ | Union Co. (Motors) Pvt. Ltd.,
29, Mount Road, Madras-2. |
| 35. Shri M. P. Sanghvi } | „ | Automotive Manufacturers Pri-
vate Ltd., 108, Bazar Ward,
Kurla Bombay-70. |
| 36. Shri R. D. Kamdar } | | |
| 37. Shri V. M. Ghatge . | „ | Ghatge & Patil, Rajaram Road,
Post Box No. 108, Kolhapur-
2. |
| 38. Shri H. K. Shah . | „ | Dhoot Agencies, 1136, Court
Road, Aurangabad. |
| 39. Shri K. S. Veluswamy | „ | The Gounder & Co., 9/69, Jail
Road, Post Box No. 512,
Coimbatore-1. |
| 40. Shri S. M. Lodha . | „ | General Auto Agencies, Sir Mir-
za Ismail Road, Jaipur. |
| 41. Shri P. M. Rane . | „ | Dadajee Dhackjee & Co., Pri-
vate Ltd., Sandhurst Bridge,
Bombay-7. |
| 42. Shri Munawar Chinoy | „ | The Bombay Garage (Private)
Ltd., Meher Building, Chow-
pathy, Bombay-7. |
| 43. Shri N. U. Paul . | „ | National Garage Pvt. Ltd.,
Bhulabhai Desai Road, Bom-
bay-26. |
| 44. Shri C. Vasudevan | „ | Sakthi Automobiles, B.C. Trust
Building, Jail Road, East
Palayam, Calicut-2. |
| 45. Shri R. N. Lakhia | „ | Lakhia Brothers, Lal Darwaja,
Ahmedabad. |

III. PUBLIC INQUIRY ON 6TH AND 7TH OCTOBER, 1967

A. Producers and Producers' Associations

- | | | |
|--------------------------|-------------------|--|
| 1. Shri K. V. Srinivasan | Represent-
ing | Association of Indian Auto-
mobile Manufacturers, Army
& Navy Building, Mahatma
Gandhi Road, Bombay-1 and
Standard Motor Products of
India Ltd., 29, Mount Road,
Madras-2. |
|--------------------------|-------------------|--|

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|-------------------------------|--------------|--|
| 2. Shri N. K. Firodia | Representing | Association of Indian Automobile Manufacturers and Bajaj Tempo Ltd., Bombay-Poona Road, Chinchwad, Poona-19. |
| 3. Shri Keshub Mahindra | „ | Association of Indian Automobile Manufacturers and Mahindra & Mahindra Ltd., Gateway Building, Apollo Bunder, Bombay-1 BR. |
| 4. Seth Bharat G. Doshi | „ | Association of Indian Automobile Manufacturers and Premier Automobiles Ltd., Agra Road, Kurla, Bombay-70 AS. |
| 5. Shri A. H. Tobacco-wala. | „ | Association of Indian Automobile Manufacturers and Tata Engineering and Locomotive Co. Ltd., Bombay House, Bruce Street, Fort, Bombay-1. |
| 6. Shri D. C. Lahot | } | Hindustan Motors Ltd., P.O. Uttarpara, Dist. Hooghly, West Bengal. |
| 7. Dr. N. Das | | |
| 8. Shri S. L. Jhunjhunwala. | | |
| 9. Seth Lalchand Hiran-chand. | } | Premier Automobiles Ltd., Agra Road, Kurla, Bombay-70 AS. |
| 10. Brig. P. V. Subramanyam. | | |
| 11. Shri P. N. Vencatesan | | |
| 12. Shri S. A. Aiyer | | |
| 13. Shri S. M. Kuvelkar | | |
| 14. Shri R. M. Sukhadia | } | Standard Motor Products of India Ltd., 29, Mount Road, Madras-2. |
| 15. Mr. S. K. Muranjan | | |
| 16. Shri L. Ramaswamy | } | Ashok Leyland Ltd., 11/12, North Beach Road, Madras, 1. |
| 17. Shri S. Muthukrishnan. | | |
| 18. Shri K. S. Ramaswamy | } | Tata Engineering and Locomotive Co. Ltd., Bombay House, Bruce Street, Fort, Bombay-1. |
| 19. Shri N. Ramamurthy | | |
| 20. Shri S. Moolgaokar | } | |
| 21. Shri S. Narayanan | | |
| 22. Shri A. Natarajan | | |
| 23. Shri J. E. Tataulicar | | |
| 24. Shri N. I. Mehta | | |
| 25. Shri K. A. Varkey | | |
| 26. Shri C. C. Karkeva | | |

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|----------------------------|----------------|--|
| 27. Shri R. R. Sule | } Representing | Mahindra & Mahindra Ltd.,
Gateway Building, Apollo
Bunder, Fort, Bombay-1.
B.R. |
| 28. Shri J. S. Karkal | | |
| 29. Shri B. M. Chopra | | |
| 30. Shri R. K. Bajaj | } . | ,, Bajaj Tempo Ltd., Bombay-
Poona Road, Chinchwad,
Poona-19. |
| 31. Shri J.C.H. Rao | | |
| 32. Shri S. Anantharam | } . | ,, Simpson & Co. Ltd., 202-203,
Mount Road, Madras-2. |
| 33. Shri P.S.V. Nathan | | |
| 34. Smt. Sharayu Daftary | } . | ,, Association of Indian Automobi-
le Manufacturers, Army &
Navy Building, Mahatma Gan-
dhi Road, Bombay-1. |
| 35. Shri C.V.K. Murthy Rao | | |
| 36. Shri H. R. Aslot | } . | ,, Automotive Engineers Society,
78-B, Dr. A. B. Road, Worli,
Bombay-18. |
| 37. Dr. R. M. Shastri | | |

B. Fleet Owners and Consumer's Associations

- | | | |
|---------------------------------|-----|---|
| 1. Shri S. G. Laud | } . | ,, B.E.S.T. Undertaking, P.O.
Box 192, Bombay-1. |
| 2. Shri P.G. Patankar | | |
| 3. Shri S. N. Chawla | } . | ,, Maharashtra State Road Trans-
port Corporation, Bellasis
Road, Bombay-8. |
| 4. Shri S. Johns | | |
| 5. Shri U.B. Raval | ., | Gujarat State Road Transport
Corporation, Ahmedabad-22. |
| 6. Shri S.V. Sri Ramulu | ., | Delhi Transport Undertaking,
P. B. No. 691, New Delhi-
1. |
| 7. Shri H. P. Agarwala | ., | Hanumanprasad Lakshminara-
yan (Transport), 207, Mahar-
shi Devendra Road, Calcutta-
7. |
| 8. Shri H. V. Gandhi | } . | ,, Federation of Indian Automobi-
le Associations, 76, Veer
Nariman Road, Churchgate,
Bombay-1. |
| 9. Shri K. G. Subramani-
an. | | |
| 10. Shri M. F. Mavji | ., | Western India Automobile Asso-
ciation, Lalji Naranji Memorial
Building, Churchgate, Bom-
bay-1. |

11. Shri Kundanlal . Represent- All India Motor Union Cong-
ing ress, 16-A, Asaf Ali Road, New
Delhi-1.
12. Shri E. S. Kitram . } ,, Bombay Taxi Association, Ken-
13. Shri N. N. Kamat . } nedy Bridge, Bombay-4.
14. Shri S. H. Jhabvala }
15. Shri A.B. Parakh . } ,, Indian Roads Transport De-
16. Shri M. P. Sanghvi . } velopment Association Ltd.,
17. Shri C. S. Nair . } P. B. No. 853, Bombay-1.
18. Shri N. Balkrishna . ,, Indian Institute of Road Trans-
port, P. B. No. 192, Bom-
bay-1.

C. Dealers and Dealers' Associations

1. Shri T. S. Santhanam. ,, Federation of Automobile De-
alers' Associations, 534, Sar-
dar Vallabhbhai Patel Road,
Bombay-7 and
Sundaram Motors Pvt. Ltd.,
37, Mount Road, Madras-6.
2. Shri A. Maiti . ,, The Motor Industries Asso-
ciation, Royal Exchange,
6, Netaji Subhas Road,
Calcutta-1 and
Walford Transport Ltd., 71,
Park, Street, Calcutta-16.
3. Shri K. N. Menon . ,, The Automobile Traders
Association, 12, Scindia
House, New Delhi-1 and,
Premnath Motors Pvt. Ltd.,
Scindia House, New Delhi-1.
4. Shri C. Duarte ,, French Motor Car Co. Ltd.,
234/3, Lower Circular Road,
Calcutta-20.
5. Shri S. H. Bhedwar ,, Metro Motors, Hughes Road,
Bombay-7.
6. Shri M. G. Chinoy . } ,, Bombay Garage Pvt. Ltd.,
7. Shri L. K. Bagla . } P. B. No. 566, Bombay-7.
8. Capt. S. P. Sanghi . ,, Sah & Sanghi, 11-C, Hughes
Road, Bombay-7.

9. Shri V. M. Ghatge . Representing Ghatge & Patil, Rajaram Road, Kolhapur.
10. Dr. J. M. Rane . , Federation of Automobile Dealers' Associations and Indian Roads & Transport Development Association Ltd., P. B. No. 853, Bombay-1.
11. Shri R. R. Aiyer . } .. Federation of Automobile
12. Shri N. K. Limji . } Dealers' Associations.
13. Shri R. Ramaswami }
14. Shri Mahindra Ma- , Automobile Dealers' Asso-
thurads ciation of Western India Ltd., C/o. Bombay Chamber of Commerce & Industry P. B. No. 473, Bombay-1.
15. Shri R. N. Pillai . , Motor Vehicles and Allied Industries Association, 22, Edward Elliotts Road, Madras-4.
16. Shri A. K. Sanghi . , The Automobile Traders' Association.
17. Shri P. Sharan Gupta } Federation of All India Auto-
18. Shri Kulbhushan } mobile Spare Parts Dea-
Chandhoke } lers Associations, P. B. No.
19. Shri S. B. Anand . } 1052, Delhi-6.
20. Shri R. K. Sethi . , Maharashtra Motor Parts Dealers' Association Ltd., Powell Building, 431, Lamington Road, Bombay-4, and Federation of All India Automobile Spare Parts Dealers' Associations.
21. Shri Behari Mehta } .. Maharashtra Motor Parts,
22. Shri G. J. Doshi } Dealers' Association Ltd.

D. Raw Materials & Ancillaries Suppliers & Associations

1. Dr. D. N. Vatcha . , Motor Industries Co. Ltd. P. B. No. 93, Bangalore-1.
2. Shri A. R. Sundaresan } .. Automobile Products of India,
3. Shri M. S. Shastri . } Bhandup, Bombay.

4. Shri P. B. Venkataraman	Representing	Engine Valves Ltd., P. B. No. 1305, Madras-16.
5. Shri M. M. Malkani	„	Guest, Keen, Williams Ltd., Wakefield House, Ballard Estate, Bombay-1.
6. Shri K. Ramachandran	}	Mahindra Ugine Steel Co. Ltd., 14, Altamount Road, Bombay-26.
7. Shri Ashish Mitra		
8. Shri V. N. Lokur	„	Mukand Iron & Steel Works Ltd., Kurla, Bombay-70.
9. Shri M. K. Raju	}	The All India Automobile & Ancillary Industries Association, 80, Dr. A. B. Road, Worli, Bombay-18.
10. Shri P. V. Shah		
11. Shri Pranlal Patel		
12. Shri V. S. Nair		
13. Shri M. L. Bagri	}	Federation of Associations of Small Industries of India, 67-71, Tamarind Lane, Fort Chambers, Bombay-1.
14. Shri S. N. Wavde		
15. Shri R. C. Purohit		

E. Central and State Government Departments/Organisations.

1. Shri S. R. Kapur	„	Ministry of Industrial Development & Company Affairs (Deptt. of Industrial Development) and Controller of Motor Cars and Commercial Vehicles, New Delhi.
2. Shri N. T. Gopala Iyengar.	}	Directorate General of Technical Development (Automobile Division), New Delhi.
3. Shri B.S.V. Rao		
4. Shri L. V. Dharmadhikari	„	Directorate General of Supplies & Disposals, New Delhi.
5. Shri U. Chatterji	„	Directorate of Industries, West Bengal, 1, Hastings Street, Calcutta-1.
6. Shri P. M. Naik	„	Directorate of Industries, Maharashtra, Sachivalaya, Bombay-32.

- | | | |
|--------------------------|--------------|---|
| 7. Shri R. S. Dave | Representing | Department of Industries, Asarwa, Ahmedabad-16. |
| 8. Shri V. Thyagaraj | „ | Collector of Customs, Bombay-1. |
| 9. Shri A. K. Bhuchar | „ | Reserve Bank of India, Post Box No. 1030, Bombay-1. |
| 10. Shri S. Srinivasan | „ | Indian Standards Institution, Manak Bhavan, 9, Bahadur Shah Zafar Marg., New Delhi-1. |
| 11. Shri S. N. Mukerji | „ | National Test House, Alipore, Calcutta-27. |
| 12. Shri P. K. Gupte | „ | National Metallurgical Laboratory, Jamshedpur-7. |
| 13. Prof. A. V. Sreenath | „ | Indian Institute of Science, Bangalore-12. |
| 14. Shri P. N. Roy | „ | Hindustan Steels Ltd., Rourkela. |

F. Other interests/observers

- | | | |
|----------------------------|---|--|
| 1. Shri N. J. Dhruv | „ | The Economic Times, Dada-bhai Naoroji Road, Bombay-1. |
| 2. Shri B. G. Sampat | } | „ The Financial Express, Sassoon Dock, Bombay-5. |
| 3. Shri Chandrasekhar | | |
| 4. Shri C. V. Hariharan | „ | Automobile News, P. O. Box No. 6095, Bombay-5. |
| 5. Miss L. D'Souza | „ | 'Transtopics', Readymoney Mansion, Veer Nariman Road, Bombay-1. |
| 6. Shri T. W. Balchandani. | „ | Automotive Engineer & Trader, Readymoney Mansion, Veer Nariman Road, Bombay-1. |
| 7. Shri K. H. Rau | „ | Transport, Noble Chambers, Parsi Bazar Street, Bombay-1. |

APPENDIX VII

(Vide paragraph 4.5.2)

Details regarding trailer manufacture in the country

Sl. No.	Name & address of the units	Licensed capacity per annum (In Nos.)	Production (In Nos.)				
			1962	1963	1964	1965	1966
1	Simpson & Co. Ltd., 202/203, Mount Road, Madras.	Trailers upto 5 tonne capacity Tank trailer . . . 600	3	254	421	1,648	799
2	K.T.Steel Industries Private Ltd., Broach Street, Bombay-19.	Trailers 3 & 5 tonnes capacity.	Nil	Nil	20	42	Nil
3	C. Commons & Sons Ltd., 103/3, Diamond Harbour Road, Calcutta.	Trailer 3 to 8 tonnes & Tankers.	13	26	87	155	52
4	Mahindra Owen Private Ltd., Gateway Building, Bombay.	Jeep Trailer 2 to 3 tonnes. 4 & 8 wheeled Trailers of 8-12 tonnes.	1,676	2,737	7,247	7,707	2,858
4A.	Mahindra Owen Private Ltd., Madras.		163	171	263	344	350

5	Steel Worth Ltd., Steel Nagar, Tinsukia.	Jeep trailer . . .	564	104	166	171	128	80
6	Do. Tejpur .	} Cargo trailer etc.	..	..	34	36	30	30
7	Do. Gauhati		..	..	..	65	24	42
8	Agrind Fabrications Ltd., 6-Ganesh Chandra Avenue, Calcutta.	Trailers upto 10 tonnes water tank trailers & Jeep trailers.	288	71	36	220	257	258
9	Aluminium Industries (Assam) Pvt. Ltd., Makum Road, Tinsukia.	Trailers . . .	N.A.	..	11	12	9	9
10	Vikrama Engineering Co., P. O. Box No. 909, Madras.	"	120	..	..	86	160	159
11	Bharat Industries & Commercial Corpn., Tower House, Chowringhee Square, Calcutta.	Trailers of various sizes & Tank Trailers.	2,140	N.A.	N.A.	N.A.	N.A.	N.A.
12	Hyderabad Allwyn. Metal Works Ltd., Sanatnagar, Hyderabad-18.	Heavy duty trailers & semi-trailers	600	Production was indicating only from July, 1967.				
TOTAL .			8,858	2,030	3,435	8,628	10,504	4,637

APPENDIX VIII

(Vide paragraph 5.6)

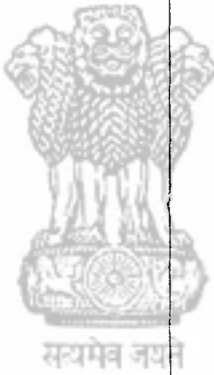
Statement showing general data in respect of automobile manufacturers in India

Sl. No.	Name and addresses of the manufacturer	Location of factory (ies)	Type of management	If managed by managing agents, full address	Name of collaborators	Name of products	
						Types of vehicles	Others, if any
0	1	2	3	4	5	6	7
1	Hindustan Motors Ltd., "India Exchange" 4, India Exchange Place, Calcutta-1.	Uttarpara. Hind-motor Station 8 miles from Calcutta in the Dist. Hooghly.	Managing Agents	Birla Brothers Private Ltd., 15, India Exchange Place, Calcutta-1.	(i) General Motors Corporation, U.S.A. (ii) Vauxhall Motors Ltd., U.K.	Cars Hindustan Trucks Bedford	(i) Cranes, (ii) Caterpillar Bulldozers, (iii) Caterpillar Scrapers, Athey Rear Dumpers, (iv) Marion shovels & Attachments. (v) Steel structural, (vi) Steel Castings and (vii) Lion Diesel Engines.
2	The Premier Automobiles Ltd., Construction House, Ballard Estate, Bombay-1. (BR).	(i) Agra Road, Kuria. (ii) Dombivli. (iii) Wadala.	Managing Agents.	Aero-Auto Limited, Construction House, Ballard Estate, Bombay-1. (BR).	(i) Chrysler Corporation, U.S.A. (ii) Fiat S.P.A. Italy (iii) Rockwell Standard Corporation, U.S.A. (iv) Henry Meadows Limited, U.S.A. (v) International Nickel Co., U.K.	Cars Fiat 1100 Trucks Dodge/Fargo.	(i) Room Airconditioners, (ii) Mild steel tubes, (iii) Railway springs, (iv) Industrial Diesel Engines, (v) Mechanic castings for machine tools, (vi) Diesel oil engines, Sugar machinery.
3	Standard Motor Products of India Ltd., 29, Mount Road, Madras-2.	Perungalathur, Vandalur P.O.	Managing Agents.	The Standard Motor Company (India) Private Ltd., 29, Mount Road, Madras-2.	The Standard - Triumph Motor Co. Ltd., U.K.	Cars Standard Herald Saloon, Standard Herald Driveaway chassis,	..

Trucks Standard-20 1 tonne truck	Trucks Comet, Beaver, Hippo.	Industrial Engines.
4 Ashok Leyland Limited, Ennore, Near Madras-57.	Board of Directors.	<p>Trucks Leyland Motors Ltd., U.K.</p> <p> <i>A. At Jamshedpur</i> (i) Steam locomotives. (ii) Diesel Industrial shunters, (iii) Tata P & H excavators of 2½ and 1½ cu. yd. capacities, pulp and paper making machinery, (iv) Steel Castings, alloy iron castings and forgings. <i>B. At Poona</i> (v) Machine Tools. (vi) Press Tools and Dies. </p>
5 Tata Engineering & Locomotive Company Limited, Bombay House, 24, Bruce Street, Fort, Bombay-1.	Managing Agents.	<p> Tata Mercedes Benz trucks and bus chassis. Daimler-Benz A. G., West Germany. </p>
6 Mahindra & Mahindra Ltd., Gateway Building, Apollo Bunder, Bombay-1.	Board of Directors.	<p> Tata Industries Private Ltd., Bombay House, 24, Bruce Street, Fort, Bombay-1. </p>
7 Bajaj Tempo Limited, Chinchwad, Near Bombay - Poona Road, Chinchwad, Poona-19.	Board of Directors.	<p> (i) Jamshedpur (Bihar), (ii) Poona (Matarashtra). </p>
8 Mahindra & Mahindra Ltd., Gateway Building, Apollo Bunder, Bombay-1.	Board of Directors.	<p> (i) Jamshedpur (Bihar), (ii) Poona (Matarashtra). </p>
9 Bajaj Tempo Limited, Chinchwad, Near Bombay - Poona Road, Chinchwad, Poona-19.	Board of Directors.	<p> (i) Jamshedpur (Bihar), (ii) Poona (Matarashtra). </p>



0	1	2	3	4	5	6	7
8	Simpson & Company Ltd., 202-203, Mount Road, Madras-2.	Madras City	Board of Directors	..	Massey Perkins U.K.	Ferguson Ltd., Perkins Engines.	(i) Industrial and Tractor type diesel engines. (ii) Body building on various types of chassis. (iii) Light Enginee- ring items such as garage crane, wheel barrows, platform trolleys, storage tanks, water tank, hand carts, (iv) Trailers.



APPENDIX IX
(Vide paragraph 9.1)
Vehicle population in the country during 1955-56 to 1965-66

Year	Passenger Cars			Commercial Vehicles					Grand Total
	Private Cars	Taxis	Total	Buses	Trucks	Others	Total		
1	2	3	4 (2+3)	5	6	7	8 (5+6+7)	9 (4+8)	
1955-56	.	187,866	15,318	203,184	46,461	119,097	15,857	181,415	384,599
1956-57	.	203,512	16,027	219,539	38,415	123,386	20,091	181,892	401,431
1957-58	.	227,324	15,325	242,649	35,595	133,111	31,427	200,133	442,782
1958-59	.	250,673	16,934	267,607	48,026	147,625	32,241	227,892	495,499
1959-60	.	262,799	19,187	281,986	53,674	156,671	35,873	246,218	528,204
1960-61	.	287,913	21,663	309,576	56,792	167,649	35,863	260,304	569,880
1961-62	.	314,024	25,620	339,644	59,560	189,096	44,3-3	292,999	632,643
1962-63	.	347,603	27,793	375,396	62,560	215,408	54,297	332,265	707,661
1963-64	.	358,906	29,541	388,447	66,513	224,181	59,030	349,724	738,171
1964-65	.	396,293	31,762	428,055	70,470	241,840	64,162	376,472	804,327
1965-66	.	422,000	33,400	455,400	75,900	262,700	70,400	409,000	864,400

REMARKS:

- (i) Figures upto 1962-63 relate only to taxed vehicles.
(ii) The number of vehicles relate to the last quarter of the financial year (i.e. 31-3-1966).
(iii) The Ministry of Transport has stated that the motor vehicles on road will be approximately same as number of vehicles registered.
(iv) Figures for 1965-66 are estimated.
(v) Separate figures for jeeps are not available.

APPENDIX X

(Vide paragraph 12.1)

Estimated consumption of steels by automobile units

Sl. No.	Name of automobile manufacturer	Description of raw material	Consumption as given by the units				Value and quantity adopted for our estimates			
			Value (Rs. lakhs)		Quantity (tonnes)		Value (Rs. lakhs)		Quantity (tonnes)	
			Indigenous	Imported	Indigenous	Imported	Indigenous	Imported	Indigenous	Imported
0	1	2	3	4	5	6	7	8	9	10
1	Hindustan Motors Ltd.	Steel bars, billets, sheets and plates	..	323.14	..	18,229.00	..	323.14	..	18,229.00
		Pig iron	..	10.55	..	2,626.00	..	10.55	..	2,626.00
2	Premier Automobiles Ltd.	Steels including tool steels	39.04	153.05	2,808.00	128.15	39.04	153.05	2,808.00	12,815.00
		Castings	104.20	..	..	..	104.20	..	1,042.00	..
3	Standard Motor Products of India Ltd.	Steel rods and sheets	1.15	12.00	85.10	608.40	1.15	12.00	85.00	609.00
		Castings, forgings and semi-finished materials	26.32	11.86	..	..	26.32	11.86	877.00	395.00
		Tool steels	1.04	1.73	..	..	1.04	1.73	82.00	118.00
4	Ashok Leyland Ltd.	Steel bars, sheets and plates including tool steels	..	..	3,133.00	1,003.13	39.80	14.65	3,133.00	1,003.00
		Castings and forgings	184.48	..	..	..	184.48	..	6,149.00	..

5	TELCO	Raw materials includ- ing tool and alloy steel	130-91	494-73	..	130-91	494-83	10,307-00	33,869-00
		Semi-finished materials including castings and forgings.	138-05	329-00	..	138-05	329-00	4602-00	10,967-00
6	Mahindra & Mahindra Ltd..	Steel including tool steel	9-29	77-30	755-00	9-29	77-30	755-00	7,222-00
		Castings & forgings .	71-76	55-65	..	71-76	55-65	2392-00	1,855-00
7	Bajaj-Tempo Ltd.	Steel, alloy steel and other raw materials	6-09	10-22	..	6-09	10-22	479-00	700-00
8	Simpson & Co. Ltd. . .	Steel plates, sheets and structurals	17-88	7-67	1,653-40	17-88	7-67	1,655-00	364-00
		Castings & forgings .	35-10	46-60	..	35-10	46-60	1,170-00	1,533-00
		TOTAL	..	..	..	815-66	1,537-60	47,540-00	89,699-00

APPENDIX XI

[Vide paragraph 12·8]

List showing the 28 varieties of steel selected by the Technical Cell for use in the automobile industry along with typical uses mentioned in I.S.I. specification.

Sl. No.	Specification (IS:1570-1961)	Type of steel	Typical use mentioned in IS : 1871
1	2	3	4
1	C15Mn75	Plain carbon	General purpose steels for low stressed components.
2	C25Mn75	Do.	Do.
3	C30	Do.	Shift and brake levers, socket, tie rod, shaft fork, rear hub etc.
4	C35Mn75	Do.	Low stressed parts.
5	C45	Do.	Bigger gears, bolts and shafts.
6	C50	Do.	Keys, shafts, cylinders, large pitch worms and gears.
7	C55Mn75	Do.	Gears, cams, keys, crank shafts etc.
8	13S25	Free cutting	Nuts, studs etc.
9	14Mn1S14	Do.	Parts where good machinability and finish are important.
10	25Mn1S14	Do.	Bolts, studs and other heat treated parts of small section.
11	40Mn2S12	Do.	Heat treated axles, shafts, small crank shafts and other vehicle parts.
12	37Mn2	Alloy steels*	Axles, shafts, crank shafts, connecting rods etc.
13	35Mn2Mo28	Do.	General engineering components such as crank shafts, bolts, wheel studs, axle shafts, levers and connecting rods.

*(excluding stainless and heat resisting steels).

1	2	3	4
14	15Cr65 . .	Alloy steels*	Roller bearings, piston pins, differential pipes.
15	17Mn1Cr95 .	Do.	Small gear wheels and shafts, steering regulators etc.
16	20MnCr1 .	Do.	Medium size gear wheels and shafts.
17	40Cr1 . .	Do.	Gears connecting rods, stub axles, steering arms etc
18	40Cr 1Mo28 .	Do.	Axle shafts, crankshafts, connecting rod, gears, high tensile bolts and nuts, propeller shaft joints etc.
19	25Cr3Mo55 .	Do.	Components requiring medium to high tensile properties and in the nitrated conditions for crank shafts, cylinder liners, gears etc.
20	T55Cr70V15 .	Do.	Trimming dies, heavy duty punches etc.
21	35Ni1Cr60 .	Do.	For heavy vehicles crank shafts, con-rods, gear shafts, cam shafts etc.
22	15NiCr1Mo12 .	Do.	Heavy duty gears, heavy vehicle and automobile transmission components.
23	15Ni2CrMo15		
24	40Ni2Cr1Mo28	Do.	High tensile bolts and studs, gear, pinion, axle shafts, tappets, crank shafts, con-rods, crank shafts etc.
25	40Ni3Cr65Mo55	Do.	Highly stressed gears, con-rods, crank shafts etc.
26	16NiCr2Mo20 .	Do.	Heavy duty gears and heavy vehicles and automobile transmission components.
27	21NiCr1Mo20 .	Do.	Not available.
28	20Ni2Mo25 .	Do.	Do.

*Excluding Stainless and heat resisting steels.

APPENDIX XII

(Vide paragraph 17·2)

List of Indian Standard for Automobile Industry

1. STRUCTURAL & METALS

(a) Ferrous

Standards Published

(The IS No. and the year)

- 210—62 Grey iron castings (*revised*).
- 224—58 Pig iron, (coke) (*revised*).
- 225—57 Pig iron charcoal (*revised*)
- 226—62 Structural steel (standard quality) (*third revision*).
- 280—62 Mild steel wire for general purposes (*revised*).
- 412—62 Expanded metal steel sheets for general engineering purposes (*revised*).
- 513—64 Cold rolled carbon steel sheets (*revised*).
- 648—62 Steel sheets for magnetic circuits of power electrical apparatus (non-oriented steel) (*revised*).
- 727—64 Hard drawn carbon steel wire for springs for general engineering purposes (*revised*).
- 808—64 Rolled steel beam, channel and angle sections (*revised*).
- 811—61 Cold formed light gauge steel structural sections.
- 961—62 Structural steel (high tensile) (*revised*).
- 1029—56 Hot rolled steel strips (baling)
- 1030—62 Steel castings for general engineering purposes (*revised*).
- 1079—63 Hot rolled carbon steel sheet and strip (*revised*).
- 1148—64 Rivet bars for structural purposes (*revised*).
- 1173—57 Rolled steel sections, tee bars.
- 1570—61 Schedules for wrought steels for general engineering purposes.
- 1730—62 Dimensions for steel plate, sheet and strip for structural and general engineering purposes.
- 1731—61 Dimensions for steel flats for structural and general engineering purposes.
- 1732—61 Dimensions for round and square steel bars for structural and general engineering purposes.

- 1762—61 Code for designation of steel.
- 1864—63 Dimensions for angle sections with legs of unequal width and thickness.
- 1865—61 Iron casting with spherical or nodular graphite.
- 1870—65 Comparison of Indian and Overseas standards for wrought steels for general engineering purposes.
- 1871—65 Commentary on Indian Standard schedules for wrought steels for general engineering purposes.
- 1875—61 Carbon steel bars, billets, blooms and slabs for forgings.
- 1879—61 Malleable cast iron pipe fittings.
- 1956—62 Glossary of terms relating to iron and steel.
- 1977—62 Structural steel (ordinary quality).
- 2004—62 Carbon steel forgings for general engineering purposes.
- 2039—64 Steel tubes for bicycle and allied purposes.
- 2049—63 Colour code for the identification of wrought steels for general engineering purposes.
- 2062—62 Structural steel (fusion welding quality).
- 2073—62 Carbon steel bars for production of machined parts for general engineering purposes.
- 2107—62 Whiteheart malleable iron castings.
- 2108—62 Blackheart malleable iron castings.
- 2484—64 Dimensions for steel tubes for bicycle purposes.
- 2567—65 Cold rolled steel strips for springs.
- 2517—63 Bright bars for threaded components.
- 2589—64 Hard drawn steel wire for upholstery springs.
- 2591—64 Hot rolled steel bars for threaded components.
- 2640—64 Pearlitic malleable iron castings.
- 2644—64 High tensile steel castings.
- 2707—64 Carbon steel castings for surface hardening.
- 2708—64 1·5 per cent manganese steel castings.
- 2749—64 Austenitic iron castings.
- 2841—64 Pig iron for special purposes.
- 2856—64 Carbon steel castings suitable for high temperature service (fusion welding quality).
- 3074—65 Steel tubes for automotive purposes.
- 3431—65 Steel for volute, helical and laminated springs for automotive suspension.

Standards under Preparation

- Steel tubes for automobile purpose.
- Phosphate treatment of iron and steel.
- Comparison of Indian and Overseas standards for wrought steels.
- Steel for laminated springs (automobiles).
- Steel for volute and helical springs (automobiles).
- Annealed steel wire for oil hardened and tempered springs for valve control.
- Steel for spring washers.
- Commentary on Indian Standards for wrought steel.

*(b) Non-Ferrous**Standards Published*

- 25—61 Antifriction bearings alloys (*revised*).
- 28—58 Phosphor bronze ingots and castings (*revised*).
- 193—56 Soft solder (*revised*).
- 293—61 Brass ingots and castings (*revised*).
- 306—60 Tin bronze ingots and castings (*revised*).
- *320—62 High tensile brass rods and sections (*revised*).
- 617—59 Aluminium and aluminium alloy ingots and castings for general engineering purposes (*revised*).
- 713—55 High purity zinc and zinc base alloy ingots for die casting.
- 733—56 Wrought aluminium and aluminium alloys, bars, rods and sections.
- *734—56 Wrought aluminium and aluminium alloys, forgings (for general and engineering purposes) (*revised*).
- *735—56 Wrought aluminium and aluminium alloys, forgings stock (for general engineering purposes).
- *736—56 Wrought aluminium and aluminium alloys, plate (for general engineering purposes).
- *737—55 Wrought aluminium and aluminium alloys, sheet and strip (for general engineering purposes).
- *738—56 Wrought aluminium and aluminium alloys, tube (for general engineering purposes).
- *739—56 Wrought aluminium and aluminium alloys, wire (for general engineering purposes).
- *740—56 Wrought aluminium and aluminium alloys, rivet stock.
- 742—55 Zinc base alloys die castings.
- 319—62 Free cutting brass rods and sections (*revised*).

- 1068—58 Copper, nickel and chromium electroplated coatings.
- 1284—58 Wrought aluminium and aluminium alloys, bolt and screw stock (for general engineering purposes).
- 1285—58 Wrought aluminium and aluminium alloys, extruded round tube and hollow sections.
- 1337—59 Hard chromium plating on steel.
- 1545—60 Solid drawn copper alloy tubes.
- 1572—60 Cadmium plating.
- 2371—63 Solid drawn copper-alloy tubes for condensers, evaporators, heaters and coolers using saline and hard water.
- 2601—64 Brass anodes for electroplating.
- 2602—64 Cadmium anodes for electroplating.
- 2605—64 Zinc anodes for electroplating.
- 2676—64 Dimensions for wrought aluminium and aluminium alloys, sheet and strip.
- 2677—64 Dimensions for wrought aluminium and aluminium alloys, plate.
- 2678—64 Dimensions for wrought aluminium and aluminium alloys, drawn tubes.
- 3331—65 Copper foil and brass strip for radiator cores.

Standards under Preparation

Copper and brass boills for radiator cores.

Code of practice for cleaning of basis metals prior to electroplating

Code of practice for hot dip galvanizing of iron and steel.

Standards on the Programme of Formulation

Structural section of aluminium and aluminium alloys.

Code of practice for electroplating.

Copper strips and foils for copper gasket.

(c) Welding

Standards Published

- 814—63 Covered electrodes for metal arc welding of mild steel (*revised*).
- *815—56 Classification and coding of covered electrodes for metal arc welding of mild steel and low alloy high tensile steels.
- 816—56 Code of practice for use of metal arc welding for general construction in mild steel.

- *819—57 Code of practice for resistance spot welding for light assemblies in mild steel.
- 1261—59 Code of practice for seam welding in mild steel.
- 1278—58 Filler rods and wires for gas welding.
- 1395—64 Molybdenum and chromium molybdenum low alloy steel electrodes for metal arc welding (*revised*).
- 2680—64 Filler rods and wires for inert gas arc welding.
- 2811—64 Recommendation for manual tungsten inert gas arc welding of stainless steel.
- 2812—64 Recommendation for manual tungsten inert gas arc welding of aluminium and aluminium alloys.
- 2927—65 Brazing alloys.

Standards under Preparation

Spot welding electrodes.
Hose fittings for welding and cutting appliances.

2. MECHANICAL & COMPONENTS

Standards Published

- 577—54 Upholstery leather.
- 810—57 Inlet and exhaust valves for internal combustion engines.
- 1001—56 Fuel pump diaphragm fabric
 - (a) Synthetic rubber proofed.
 - (b) Varnish proofed.
- 1135—57 General requirements for leaf springs for automobile suspension.
- 1259—62 Vinyl coated fabrics (leather cloth) (*revised*).
- 1421—64 Cellulose nitrate coated fabric (*revised*).
- 1543—64 Single cylinder fuel injection pumps (*revised*).
- 1600—60 Code for type testing of constant speed internal combustion engines for general purposes.
- 1601—60 Performance of constant speed internal combustion engines for general purposes.
- 1602—60 Code for type testing variable speed internal combustion engines for automotive purposes.
- 1603—60 Performance of variable speed internal combustion engines for automotive purposes.
- 1741—60 Latex foam rubber products.
- 2396—63 Braided hose of rubber for petrol and diesel fuels.
- 2553—64 Safety glass (*revised*).

- 2634—64 Helical springs for automobile suspension.
- 2742—64 Automotive brake lining.
- 2765—64 Radiator hoses.
- 3169—65 Two-stage, one litre fuel filters for diesel engines.
- 3170—65 Dimensions for injection nozzles size 'S' for diesel engines.
- 3171—65 Dimensions for injection nozzles holder size 'S' for diesel engines.
- 3172—65 Banjo connections for fuel injection equipment for diesel engines.
- 3173—65 High pressure connections for fuel injection equipment for diesel engines.
- 3174—65 Banjo bolts for fuel injection equipment for diesel engines.
- 3175—65 Copper washers for fuel injection equipment for diesel engines.
- 3511—66 Cylinder bore diameters for internal combustion engines.

Standards under Preparation

- Hydraulic shock absorbers.
- Clutch facing for automotive transmission (sent to press)
- Portable jacks, mechanical and hydraulic.
- General requirements for piston rings.
- General requirements for automobile lighting and signalling devices.
- Trailers.
- Foot tyre inflators.
- General requirements for positioning and routing of engine.
- Exhaust pipes in automobiles (sent in wide circulation).
- Vehicle performance code.
- General requirements for steering wheels.
- Slotted countersunk head screws and set screws for automobiles.
- Hexagonal bolts, nuts and screws for automobiles.
- Cross recessed pan head, slotted round and cheese head screws for automobiles.
- Spring washers, plain washers and tooth lock washers for automobiles.
- Rivets and split cotter pins for automobiles.
- Methods of test for diesel engine fuel filters.
- Automotive radiators.

Standards on the Programme of Formulation

- Leaf springs assemblies.
- Spring pin and bushes.
- Spring hangers and shackles.
- Shackle pins and bushes.
- Wheel rating and standard data.
- Wheeled vehicle safety code.
- Tracked vehicle yardage rating.
- Fasteners.
- Tubes and fittings.
- Fuel hose.
- Tyre levers.
- Vehicle loading.
- T-Sign plate and reflex type of reflector.
- Railway jacks.
- Platform jacks.
- Speedometer.
- Motor rear axles.
- Seat belt anchorage points.
- Industrial types of jacks.
- Radiator cap.
- Drain cock.
- Hand tyre inflators.
- Methods of test for performance of air filters for internal combustion engines.
- Piston pins (gudgeon pins).
- Circlips.
- Wet and dry type liners for internal combustion engines.
- Valve guide and valve seat inserts.
- King pins and ball studs.
- Keys and keyways for internal combustion engines.
- Direction of rotation and identification numbers for cylinders of internal combustion engines of marine, stationary and vehicular type.
- Proforma for test certificate.
- Flange mountings for internal combustion engines.
- Method of analysis of exhaust of internal combustion engines.
- Threads for inlet and outlet openings.
- Derating charts.

Cast iron pistons.

Aluminium alloy pistons.

Code of practice for installation of land engines.

Performance and testing of diesel engines for rail traction purposes.

Driving devices, including pulleys normally used.

Tyre, tubes and rims.

Rubber component used in automobile vehicles (Hydraulic brake seal cups and grommets are taken up at the first instance).

3. ELECTRICALS

Standards Published

- 395—62 Lead acid storage batteries (light-duty) for motor vehicles (*Second revision*).
- 985—62 Lead acid storage batteries (heavy duty) for motor vehicles (*revised*).
- 1062—63 Methods of test for sparking plugs (*revised*).
- 1063—63 14 mm sparking plugs (*revised*).
- 1145—62 Lead acid storage batteries for motor cycle auto-rickshaws and similar vehicles (*revised*).
- 1146—60 Hard rubber containers for motor vehicle batteries.
- *1606—66 Schedule for automobile lamps (*under print*).
- 1884—(Part I)—1961 Automobile electric horns Part I : DC Vibrating type.
- 1884—(Part II)—1963 Automobile electric horns Part II: Wind fone type.
- 2077—62 Automobile electric horn relays.
- 2081—62 Taper terminal cable connectors for automobile batteries.
- 2325—63 Ignition coils.
- *2465—63 Cables for motor vehicles.
- 2577—63 Cartridge fuse-links for automobiles.
- 2646—64 Generators dynamos for (automobiles).
- 3028—65 Method of measurement of noise emitted by motor vehicles sound level metres for measurement of noise emitted by motor vehicles.
- 3105—66 General requirements for automobile lighting and signalling devices.
- 3141—65 Starters for automobiles.
- 3563—66 Automobile head lights (replaceable bulb type).

Standard under Preparation

Head lights (replaceable bulb type).
 Side lights, tail lights, parkings lights, stop lights, and direction indicators.
 Wind screen wipers.
 Method of test for distributors.
 Methods of tests for horn switches for automobiles.
 Flashers for direction indicators.
 Foot-operated head-light dip switches for automobiles.
 Head-light switches for automobiles.
 Fuse clip/fuse box for automobiles.
 Colour code for automobile wiring.

Standards on the Programme of Formulation

Voltage regulator
 All type of electrical switches used in automobiles.
 Stop light switches for automobiles.
 Code of practice for use of lighting and signalling equipment on cars and commercial vehicles.
 Flasher units.
 Dimensions for generators.
 Dimensions for alternators for automobiles.
 Dimensions for starters.
 Headlights (sealed beam type).
 Fuel gauges.
 Electric fuel pump.
 A.C. electric horns for motor cycles and scooters.
 Ammeters.
 Magnets.
 Photometric testing of headlights.

4. CHEMICALS (LUBRICANTS, FUELS ETC.)

Standards Published

- 266—61 Sulphuric acid (covers battery grade acid) (*revised.*)
 317—59 Automotive hydraulic brake fluid.
 493—58 Machinery and spindle oils (*amended*)
 496 Internal combustion engine lubricating oils (*revision in press*).
 *1002—56 Multipurpose grease No. 1, No.2 and No. 3.

- 1069—57 Water for storage batteries.
- 1118—57 Gear lubricant, multipurpose (extreme pressure gear oil)
- 1277—58 Gear lubricant, regular.
- 1585—60 Motor gasoline 79 octane.
- 1628—60 Oil, lubricating, axle, regular and premium.
- 2297—63 Gear lubricants, compounded
- 2560—63 Rubber, based adhesives for tyres and tubes, non-curing.
- 2561—63 Rubber based adhesives for the automobile industry.
- 2562—63 Rubber based adhesives for tyres and tubes, curing.
- 2796—64 Motor gasoline 83, octane.

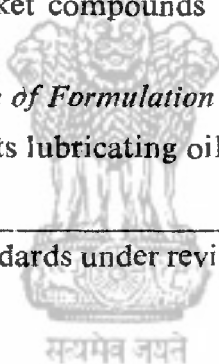
Standards under Preparation

Shellac jointing or gasket compounds (wide circulation stage)
Motor benzole.

Standards on the Programme of Formulation

Filter and filter elements lubricating oil
Car polish.

NOTE.—*Indicates standards under revision.



APPENDIX XIII

(Vide paragraph 21.1)

Motor Cars (Distribution and Sale) Control Order 1959

GOVERNMENT OF INDIA

MINISTRY OF COMMERCE AND INDUSTRY.

ORDER

New Delhi, the 1st May, 1959.

S.O. 994.—Whereas it appears to the Central Government that it is necessary so to do for securing the equitable distribution and availability at fair prices of motor cars;

Now, therefore, in exercise of the powers conferred by section 18G of the Industries (Development and Regulation) Act, 1951 (65 of 1951), the Central Government hereby makes the following Order, namely :—

1. Short title extent and commencement—(1) This Order may be called the Motor Cars (Distribution and Sale Control Order, 1959.

() Omitted by (2) It extends to the whole of India ()

Amendment

Order 1964 dated. 21-5-1964 (3) It shall come into force on the 1st Day of S. May, O. No. 1992 1959.

2. Definitions.—In this Order, unless the context otherwise requires,—

- (a) “Controller” means a person appointed by Central Government to be the Controller of Motor Cars for the purposes of this Order;
- (b) “dealer” means a dealer or a sub-dealer in motor cars, and includes an agent appointed by a manufacturer for the sale of motor cars;
- (c) “manufacturer” means a manufacturer specified in Schedule I;
- (d) “Motor car” means a motor car of any description specified in Schedule I, manufactured or assembled in India, or manufactured in India from components imported into India or manufactured in India or partly imported and partly manufactured in India, and includes every such description of motor car, whether called a station wagon, utility type passenger car or by any other name;

Inserted by Fourth Amendment Order '65 dated 28-9-1965 S.O. No. 3103 (dd) “Government of a State” in relation to a Union Territory, means the Administrator thereof.

(e) “Register” means the register maintained by a dealer under this Order;

(f) “Schedule” means a Schedule to this Order.

3. *Controller to fix quotas.*—The Controller may, from time to time by order—

- (a) fix quotas of motor cars for meeting the requirements of the Government, or of any public authority, or of any class of persons having regard to the nature of their work or duties, or of specified regions in India, and different quotas may be fixed for different purposes or for different descriptions of motor cars;
- (b) direct a manufacturer to distribute the motor cars manufactured by him for sale in such regions through such dealers, in such number and manner and at such times as may be specified in the order.

4. *Distribution of Motor Cars by manufacturers.*—No manufacturer shall, after the commencement of this Order, sell or otherwise dispose of, or offer to sell or otherwise dispose of, any description of motor cars manufactured by him whether manufactured before or after such commencement or, whether in assembled or unassembled condition, except in accordance with the order made by the Controller under clause 3.

5. *Application for purchase of Motor cars:—*

() Substituted
by Amendment
Order 65 dated
18-5-1965 S. O.
No. 1649

- (1) Every person desirous of purchasing a motor car shall apply (to the dealer of the area in which he is resident) in the form set out in Schedule II.

Substituted by
Second Amend-
ment Order
1965, dated
29-6-1965 S. O.
No. 2138

- (2) Subject to the provisions of sub-clause (2B) every applicant shall also furnish along with the application a Post Office Savings Bank Pass Book from a Post Office evidencing the fact that he has opened a Security Deposit Account in the post office for a sum not less than Rs. 2,000 and pledged to the dealer.

(2A) When the Motor Car is ready for delivery, the dealer shall send intimation of that fact in writing to the pledger applicant along with the Post Office Savings Bank Pass Book and an authority authorising the pledger applicant to withdraw the money from the post office.

() Substituted
by Third Amend-
ment Order, 65
dated 26-8-65
S. O. No. 2698

- (2B) Where, at the commencement of the Motor Cars (Distribution and Sale) Control (Second Amendment) order, 1965, the name of any person appears in the books of the dealer as an applicant for the purchase of a Motor Car such person shall, within (ninety) days of such commencement, furnish such Post Office Savings Bank Pass Book as is referred to in sub-clause (2) in lieu of the bank guarantee already furnished to the dealer, and thereupon the dealer shall release the bank guarantee forthwith :

() **Substituted by Third Amendment Order, '65 dated 26-8-65 S.O. No.2698** Provided that the Controller may, having regard to the circumstance of any case and the purposes to be served by this Order, extend, by order in writing the said period of (ninety) days to such further period as he deems fit.

6. *Maintenance of register*.—(1) Every dealer shall maintain a register in which he shall register :—

- (a) the names and other particulars of persons who have applied to him in the manner specified in clause 5 for the purchase of a motor car;
- (b) the names of persons appearing in the books of the dealer at the commencement of this Order.

(2) The names shall be registered in the case of persons referred to in sub-clause (1)(a), in accordance with the date of the receipt of the application and in the case of persons referred to in sub-clause (1)(b) in accordance with the date on which the name was entered in the book of the dealers.

Substituted by Fourth Amendment Order, 1965 dated 28-9-1965 S. O. 3103 (3) The register shall be open for inspection during working hours—

- (a) by any member of the public;
- (b) in any Union Territory, by such Officers as may be authorised in this behalf by the Central Government or the Administrator by general or special order, and
- (c) in any other area, by such officers of the Central Government or a State Government as may be authorised in this behalf by the Central Government or the State Government, as the case may be, by general or special order.

7. *Sale of motor cars by dealer*.—Except where the sale of a motor car is to the Government or to a public authority or to a member of a class of persons to whom a special quota has been fixed no dealer shall, after the commencement of this Order sell a motor car to any person whose name is not on the register maintained by him under clause 6 or otherwise than in the order in which the names are registered in that register.

Provided that, in the case of a person who had registered his name for the purchase of a motor car with one dealer and who not less than one month of such registration, has been permanently transferred to a place within the area of another dealer, the Controller or, in a State, an Officer appointed for the purpose by the Government of that State may, by special permit in writing, authorise such other dealer to sell a motor car to such person at his turn established with the dealer with whom such person's name originally registered.

Provided further that, where the person whose name is already on the register of a dealer is dead, the Controller or, in a State, an Officer

appointed for the purpose by the Government of that State may, after making such inquiry as he deems fit, authorise the dealer, by permit in writing, to sell the motor car to the heir of such person.

7A. Restrictions on purchase of new motor cars.—No person who has purchased a new motor car in any calendar year shall be permitted to purchase another new motor car in the same year, except under a permit in writing from the Controller or, in a State, an officer appointed for the purpose by the Government of that State :

Provided that in the case of a purchaser which is a company, association or other body of persons, whether incorporated or not, the Controller or the officer so appointed may having regard to the nature of its business or its functions or any other relevant circumstances, by order in writing stating the reasons therefor, authorise the purchase in any calendar year of such number of new motor cars not exceeding six as he may fix.

8. Motor cars not to be resold or diverted for a different purpose.—

Substituted by (1) No person shall, before the expiry of two years
Second Amend- from the date when a motor car was first pur-
ment Order 1964, chased as new motor car—
dated 29-8-1964.

S. O. No. 3010

(a) sell or offer to sell it, or

(b) divert it for a purpose other than the one for which it was obtained.

except under and in accordance with the terms and conditions of a permit in writing from the Controller or, in a State, an Officer appointed for the purpose by the Government of that State.

(2) In granting or refusing a permit under sub-clause (1) the Controller or other Officer shall have regard to the circumstances relating to the proposed resale or diversion of purpose, as the case may be, and to the objects to be served by this Order.

9. Maintenance and production of books accounts etc.—(1) Every manufacturer and every dealer shall keep such books, accounts and records relating to the manufacture and distribution or, as the case may be, the sale of motor cars as the Controller may prescribe.

(2) Every such book, account or record shall, when so required, be produced for inspection before the Controller or other authority specified by the Central Government in this behalf.

(3) Every manufacturer and every dealer shall, furnish to the Controller such returns in such manner and at such times as the Controller may specify.

SCHEDULE I

(See clause 2(c) and (d))

Name of manufacturer	Description of Motor cars
1. M/s. Hindustan Motors Ltd., Uttarpara, Distt. Hooghly, (West Bengal).	Hindustan Landmaster/Ambas- sador.
2. M/s. Premier Automobiles Ltd., Construction House, Ballard Estate, Bombay.	Fiat '1100'
3. M/s. Standard Motor Products of India Ltd., 29, Mount Road, Madras.	Standard '10'

SCHEDULE II

(See clause 5(1))

Substituted by Application for purchase of a motor car.
 Second Amend- To
 ment Order 1965 (Name and address of the dealer)
 dated 29-6-65
 S. O. No. 2138.

Dear Sir,

I/We want to purchase a.....(description of
 Motor Car).

Please book my/our order and let me/us know the registration number of the order and price of the Motor Car. I/We forward here with a Post Office Savings Bank Pass Book to show that I/We have opened a Security Deposit Account in.....
 Post Office for Rs 2,000/- pledged in your favour which will not be withdrawn by me/us except on a written authority from you at the time when the vehicle is ready for delivery. The requisite particulars are given as below:—

- (a) Full name and address of the applicant.
- (b) Vocation of the applicant
- (c) Whether the applicant pays income tax;

- (d) Whether the applicant owns or has owned any Motor Car and if so, the date of purchase and sale, if any, of the last Motor Car;
- (e) Whether the applicant has registered for a Motor Car with any other dealer, (if the answer is 'yes' the particulars of the order should be stated);
- (f) Number and date of the Post Office Security Deposit Account;
- (g) Specifications of the Motor Car to be purchased;
- (h) Any other information/instruction for the dealer.

(Further, I /We do.....)

() Omitted by
Third Amend-
ment Order, 1965
dated 26-8-1965
S. O. No. 2698.

Yours faithfully,

Signature of applicant.....
Date

(No. A.E.Ind. 1(37)/59

(Sd./ R. V. RAMAN,
Joint Secretary

MINISTRY OF INDUSTRY

New Delhi, the 29th March, 1966
8th Chaitra, 1888

ORDER

S.O. In exercise of the powers conferred by section 18G of the Industries (Development and Regulation) Act, 1951, (65 of 1951), the Central Government hereby makes the following Order further to amend the Motor Cars (Distribution and Sale) Control Order, 1959, namely :—

1. This Order may be called the Motor Cars (Distribution and Sale) Control (Amendment) Order, 1966.

29—5 T. C. Bom./68

2. After sub-clause (2) of clause 5 of the Motor Cars (Distribution and Sale) Control Order, 1959, the following provision shall be inserted, namely :

“Provided that where there is a reasonable possibility of a motor car being delivered to an applicant by the dealer within a period of forty-five days from the date of the application, the applicant may not furnish the Post Office Savings Bank Pass Book up-to the said period of fortyfive days.”

[(No. 8(15)/66-A.E. Ind. (I)]

(Sd.) R. V. RAMAN,

Joint Secretary to the Govt. of India

To

The General Manager,

Government of India Press, New Delhi.

Copy forwarded to :—

1. All Ministries of the Government of India.
2. All State Governments including Centrally Administered Areas.
3. D.G.T.D.
4. All State Controllers of Motor-Cars.
5. D. G. S. & D., New Delhi.
6. Licensing Policy Section.
7. Library Section with a request that two printed copies of the Order published in the Gazette of India may please be furnished to S. E. Ind.(I) Section.

Copy also forwarded to :

1. All manufacturers of Motor-Cars.
2. The Association of Indian Automobile Manufacturers.
3. The Federation of Automobile Dealers Associations, 434, Sardar Vallabhbhai Patel Road, Bombay-7.

S. R. KAPUR,

Under Secretary to the Government of India.

MINISTRY OF INDUSTRY

New Delhi, the 17th May, 1966
27th Vaisahka 1888

ORDER

S. O. No. 1550.—In exercise of the powers conferred by section 18-G of the Industries (Development and Regulation) Act, 1961 (65 of

1951), the Central Government hereby makes the following Order further to amend the Motor Car (Distribution and Sale) Control Order, 1959, namely :—

1. This Order may be called the Motor Cars (Distribution and Sale) Control (Second Amendment) Order, 1966.

2. In the Motor Cars (Distribution and Sale) Control Order, 1959, after sub-clause(2) of clause 6, the following sub-clause shall be inserted namely :—

“(2A) Where more than one application is received on the same date the time of receipt of each of the applications shall be entered thereon and the names shall be duly registered according to the point of time of receipt of each of the applications :—

Provided that where more than one application is received at the same point of time, those applications may be arranged in alphabetical order of the names and duly registered in that order.”

[(No. 8(15)/66-A.E.Ind.(I)]

(Sd.) R. V. RAMAN,

Joint Secretary to the Government of India

To

The General Manager,
Government of India Press, New Delhi.

Copy forwarded to :—

1. All Ministries of the Government of India.
2. All State Governments including Centrally Administered Areas
3. D. G. T. D.
4. All State Controllers of Motor-Cars.
5. D. G. S. & D., New Delhi.
6. Licensing Policy Section.
7. Library Section with a request that two printed copies of the Order published in the Gazette of India may please be furnished to A. E. Ind. (I) Section.

Copy also forwarded to :—

1. All manufacturers of Motor-Cars.
2. The Association of Indian Automobile Manufacturers.
3. The Federation of Automobile Dealers Associations, 434, Sardar Vallabhbhai Patel Road, Bombay-7.

(Sd.) M. R. SACHDAV,

for Under Secretary to the Government of India

APPENDIX XIV

(Vide paragraph 23.1.1)

Import Policy for motor vehicles parts (Consolidated Quota) from October 1957—March 1958/to April 1967—March 1968

Sl. No.	Licensing Period	E. I. quota	A.U. Policy
1	2	3	4
1	October, 1957—March, 1968	25% Genl. 25% Soft	(i) <i>Ad-hoc</i> licences for State Transport Authorities and other fleet owners owning a fleet of 25 vehicles or above. (ii) <i>Ad-hoc</i> licences for firms with approved manufacturing programme.
2	April, 1958—September, 1958	Do.	(i) A. U. applications from State Transport Authorities and other fleet owners owning a fleet of 25 vehicles or above will be considered and licences issued on the basis of either 100% of half of their best years' imports during any one year 1954-55, 1955-56 and 1956-57 or Rs. 150/- per petrol driven vehicle or Rs. 200/- per diesel driven vehicle whichever is more. (ii) <i>Ad-hoc</i> licences for approved manufacturers/firms.
3	October, 1958—March, 1959	Do	Do.

- 4 April, 1959—September, 1959 . Do.
- 5 October, 1959—March, 1960 . Do.
- 6 April 1960—September, 1960 . Do.
- 7 October, 1960—March, 1961 . Do.
- 8 April 1961—September, 1961 . 25%
- (i) A. U. applications from State Transport Authorities and other fleet owners owning a fleet of 25 vehicles or above will be considered and licences issued on the basis of either 100% of half of their best years' imports during any one year 1954-55, 1955-56 and 1956-57 or Rs. 250/- per petrol driven vehicle or Rs. 350/- per diesel driven vehicles whichever is more.
- (ii) *Ad-hoc* licences for approved manufacturers/firms.
- (i) A. U. applications from State Transport Authorities and other fleet owners owning a fleet of 25 vehicles or above will be considered and licences issued on the basis of either 100% of half of their best years' imports during any one year 1954-55, 1955-56 and 1956-57 or Rs. 250/- per petrol driven vehicle or Rs. 350/- per diesel driven vehicle whichever is more.
- (ii) *Ad-hoc* licences for approved manufacturers/firms.



4

3

2

1

9 October, 1961—March, 1962

20%
(Supplementary licences
to E. Is. on *ad-hoc* basis
for imports from U.S.A.
only).

(i) A. U. applications from State Transport Authorities and other fleet owners owning a fleet of 25 vehicles or above will be considered and licenses issued on the basis of either 100% of half of their best years' imports during any one year 1954-55, 1955-56 and 1956-57 or Rs. 250 per petrol driven vehicle or Rs. 350 per diesel driven vehicle whichever is more.



(ii) *Ad-hoc* licenses for approved manufacturers/firms.

10 April, 1962—March 1963 .

15%
(Supplementary licenses to
E. Is. on 5% quota basis
for imports from (U.S.A.
only).

(i) A. U. applications from State Transport Authorities and other fleet owners owning a fleet of 25 vehicles or above will be considered and licenses issued on the basis of either 100% of half of their best years' imports during any one year 1954-55, 1955-56 and 1956-57 or Rs. 250 per petrol driven vehicle or Rs. 350 per diesel driven vehicle whichever

is more. Under this provision applications from co-operative societies with individual operators as members with a fleet of 25 vehicles or above which are duly registered with the State Registrars of Cooperative Societies will be considered.

(ii) Firms with approved manufacturing programme will also be allowed licences in consultation with Development Wing (now DGTD).

Do.

Do.

7½%
(Supplementary licences
to Established/Importers
on 5% quota basis for
imports from U.S.A.
only).

7½% free and 5% under
U.S. AID.

Policy not announced due
to tight foreign exchange
position.

Approved manufacturers of motor cars
etc. will be informed of their allocations
separately.

11 April, 1963—March 1964

12 April, 1964—March 1965

13 April, 1965—March 1966

14 April, 1966—March 1967

(i) 291/IV Motor Van and
motor lorries imported
complete.

Nil

1	2	3	4
	(ii) 292/IV Motor cars including taxi cabs.	Nil	Imports of raw materials and semi-finished parts to approved manufacturers of cars etc. will be licensed on annual basis.
	(iii) 293-295-297/IV vehicle parts.	<p data-bbox="291 1060 317 1142">Motor</p> <p data-bbox="291 728 943 1031">Detailed policy is given in Appendix 26 to Red Book. E. I. quota percentage for licensing of general-motor vehicle parts is 7½% vide P.N. 62/66 dt. 7-5-66. This has been further liberalised and the extent of increase is allowed upto 5% of the value of the quota certificate. Special licences are granted for motor vehicle parts to actual users, established importers & others from U.S.A. under U.S. Aid, Non-project loans vide P. N. 86/66 dt. 23-6-66 amended by P. N. 117/66 dt. 16-8-66. Policy of individual items is given in list III of App. 26 to the current Red Book, M. V. parts are</p>	<p data-bbox="291 199 317 709">Actual users policy for State Transport Authorities and other fleet owners is given in para 3 of App. 26 to the current Red Book. Actual users are also granted special licences for import from U.S.A. under U.S. AID Non-project Loan as already indicated under column relating to E.I. policy.</p>

also allowed under National Defence Re-mittance Scheme to all categories of importers *vide* P. N. 88/65 dt. 19-10-65.

Recognised assemblers will be informed of their allocation separately.

A. U. applications for licences for C.K.D. packs to approved manufacturers will be considered. Such applications should be submitted to GGI & E through D. G. T. D.

15 April 1967—March 1968

(i) 291/IV Motor Van and lorries imported complete. Nil

(ii) 292/IV Motor Cars including taxi cabs. Nil

(iii) 293-295-297/IV Motor vehicle parts. Detailed policy is given in Appendix 26 to the Red Book.

(iv) 294/IV Motor Cycles & Motor Scooters (i) Motor Cycle & Scooters. Nil

(ii) auto attachments Nil



1	2	3	4
	(v) 296/IV Motor omnibuses Chassis of motor omnibuses, Motor Vans and motor lorries.	Nil	Nil
	(vi) 86(i)/V Auto Rickshaws	Nil	Nil
	(vii) 86(ii)/V Trailers all types including tipping trailers	Nil	Nil
	(viii) 86(iii)/V Perambulators and parts thereof.	Nil	Nil
	(ix) 86(iv)/V Specialized vehicles	Nil	Nil
	(x) 86(v)/V Others.	Nil	Nil

APPENDIX XV



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सत्यमेव जयते

APPENDIX XV

(Vide paragraph 23·2·1)
Countrywise imports of vehicles to India

(Value in rupees)

Sl. No.	Country from which imported	1957		1958		1959		1960 (Jan.-March)		1960-61	
		Nos.	Value	Nos.	Value	Nos.	Value	Nos.	Value	Nos.	Value
1	2	3	4	5	6	7	8	9	10	11	12
1. Passenger Cars											
	U. K.	61	2,59,874	54	2,98,950	45	4,10,127	3	24,167	17	2,26,186
	U. S. S. R.	1	32,240	1	8,300	1	9,550	..	..	..	..
	Germany West	13	1,25,138	6	69,797	9	1,15,663	1	9,193	3	31,102
	Sweden . . . . .	..	..	..	..	..	..	..	..	..	..
	Netherlands	1	14,619	..	..	2	20,640	..	..	3	19,871
	France	13	1,06,134	2	24,337	..	..	..	..	4	33,111
	Italy	55	2,63,468	2	19,856	10	83,868	..	..	6	55,953
	Czechoslovakia	2	11,556	..	..	..	..	..	..	..	..
	Ceylon	4	29,206	..	..	2	12,794	1	7,600	..	..
	Singapore	1	6,851	1	4,524	2	12,002	..	..	..	..
	Iraq	1	15,000	..	..	..	..	..	..	..	..
	Philippines	1	7,125	..	..	..	..	..	..	..	..
	Canada	2	20,417	1	10,200	1	15,066	..	..	..	..
	U. S. A.	92	11,40,215	300	28,11,920	48	6,38,369	4	45,119	31	392,410

Norway.	.	.	.	.	1	8,000	2	64,300	..	..	..	..
Switzerland	.	.	.	..	1	8,501	..	..	..	2	18,873	..
Kenya	.	.	.	..	1	9,115	..	..	..	..	..	..
Denmark	.	.	.	..	..	..	N.A.	18,000	2	11,860	1	10,544
Belgium	.	.	.	..	..	..	1	6,556	..	..	..	..
Yugoslavia	.	.	.	..	..	..	..	..	..	..	..	..
Kuwait.	.	.	.	..	..	..	1	9,907	..	..	..	..
Lebanon	.	.	.	..	..	..	1	7,789	..	..	..	..
Thailand	.	.	.	..	..	..	1	7,408	..	..	..	..
F. Malaya	.	.	.	..	..	..	..	..	..	..	..	..
China	.	.	.	..	..	..	1	7,711	..	..	..	..
Hong kong	.	.	.	..	..	..	..	..	..	..	..	..
Pakistan West	.	.	.	..	..	..	3	23,478	..	..	..	..
Australia	.	.	.	..	..	..	..	..	..	..	..	..
Germany East	.	.	.	..	..	..	..	..	..	..	..	..
Japan	.	.	.	..	..	..	..	..	..	1	5,363	..
Burma	.	.	.	..	..	..	..	..	..	..	..	..
Malaysia	.	.	.	..	..	..	..	..	..	..	..	..
TOTAL	.	.	.	247	20,27,843	370	32,73,500	130	14,63,223	11	97,939	68 7,93,413

APPENDIX XV—(contd.)

(Value in rupees)

Sl. No.	Country from which imported	1957		1958		1959		1960 (Jan-March)		1960-61			
		Nos.	Value	Nos.	Value	Nos.	Value	Nos.	Value	Nos.	Value		
2. Complete knocked down Cars													
	U. K.	3,148	1,05,84,606	4,330	1,19,13,761	1,120	23,83,802	..	..	1,168	43,79,936
	Italy	4,600	1,74,60,105	2,448	69,69,770	2,736	71,06,717	1,680	43,12,493	1,045	26,96,198		
	U. S. A.	1,989	13,89,546	792	30,25,327	2,474	93,75,018	108	4,66,877	1,494	43,53,373		
	Malaya . . . . .	..	..	..	..	1	6,464	..	..	..	..
	West Germany . . . . .	..	..	..	..	..	..	..	..	1	12,946
	South Arabia . . . . .	..	..	..	..	..	..	..	..	36	2,48,327
	TOTAL	9,737	4,19,43,257	7,570	2,19,08,858	6331	1,88,72,001	1,788	47,79,370	3,744	1,16,90,780		
Country from which imported													
Sl. No.	Country from which imported	1961-62		1962-63		1963-64		1964-65		1965-66		1966-67	
		Nos.	Value	Nos.	Value	Nos.	Value	Nos.	Value	Nos.	Value	Nos.	Value
	U. K.	276	5,42,871	58	5,82,317
	Italy
	U. S. A.	120	10,17,272
	Malaya
	West Germany
	South Arabia
	TOTAL	398	15,60,143	58	5,82,317

Sl. No.	Country from which imported			1957			1958			1959			1960 (Jan.-March)			1960-61		
	Nos.	Value	Nos.	Value	Nos.	Value	Nos.	Value	Nos.	Value	Nos.	Value	Nos.	Value	Nos.	Value	Nos.	Value
1	2	3	4	5	6	7	8	9	10	11	12							
3. Second hand cars																		
U.K.	.	.	30	2,15,731	9	57,516	60	4,71,405	48	4,05,276	124	10,25,233						
West Germany	.	.	8	69,229	1	6,952	2	19,364	8	59,588	38	3,64,259						
Netherlands	.	.	1	4,446	..	..	3	25,093	..	..	3	22,551						
Belgium	.	.	1	16,578	..	..	2	27,978	1	12,428	..	..				
France	.	.	1	32,493	1	4,772	1	7,230	1	8,665	8	67,920						
Italy	.	.	1	8,928	2	12,806	3	26,690	1	8,414	8	92,841						
U.S.A.	.	.	19	1,67,913	9	94,768	8	84,062	6	67,526	46	5,08,693						
Sweden	5	44,772						
Switzerland	2	21,063	..	..	2	18,549						
Japan	2	10,219	..	..	3	17,746						
Australia	2	23,325						
U. S. S. R.						
East Germany						
Others	.	.	6	67,027	7	67,039	19	1,46,976	18	67,884	..	..				
TOTAL																		
			67	5,82,345	29	2,43,853	102	8,40,080	73	6,29,781	284	25,64,560						

APPENDIX XV—(contd.)

Sl. No.	Country from which imported	1961-62		1962-63		1963-64		1964-65		1965-66		1966-67	
		Nos.	Value	Nos.	Value	Nos.	Value	Nos.	Value	Nos.	Value	Nos.	Value
1	2	13	14	15	16	17	18	19	20	21	22	23	24
3. Second hand cars—(contd.)													
	U. K.	147	11,89,082	112	9,65,127	86	7,41,732	73	5,63,722	41	3,35,279	17	1,89,527
	West Germany	65	5,63,944	37	3,39,420	51	5,15,034	46	3,89,578	46	4,26,296	20	2,45,021
	Netherlands	2	19,654	2	16,004	3	26,722	..	..	1	6,800	2	230
	Belgium	2	12,640	3	28,647	2	2,21,146	..	..	12	78,132	..	..
	France	11	83,506	16	96,208	7	55,167	31	1,94,893	10	64,979	3	19,363
	Italy	29	2,41,949	27	2,27,123	15	1,24,655	11	61,886	27	1,82,666	8	63,823
	U.S.A.	77	8,04,255	37	3,56,202	71	7,40,543	39	3,75,643	39	4,72,257	28	3,16,188
	Sweden	6	54,413	..	..	3	24,532	1	6,973	1	8,469	..	..
	Switzerland	2	15,340	6	65,199	3	19,778	1	4,850	2	13,804	2	36,187
	Japan	2	18,867	5	30,704	5	38,979	1	11,662	10	62,575	..	..
	Australia	1	11,173	..	..	5	54,574	1	12,671	20	2,22,593	1	12,700
	U.S. . R. .	1	8,608	..	..	3	25,550	..	..	1	8,759	..	..
	East Germany	..	..	..	..	2	24,471	1	10,843	..	..	..	..
	Others	51	3,15,10,517	41	3,67,701	52	1,63,649	43	2,92,905	45	6,27,100	6	83,768
	TOTAL	396	34,53,948	286	24,92,335	308	27,76,432	248	19,25,626	255	25,09,709	87	9,89,613

1	2	3	4	5	6	7	8	9	10	11	12	
A. Jeeps & Landrovers												
U. K.	.	.	84	8,72,521	25	2,58,588	37	3,72,651	7	87,343	8	69,416
U. S. A.	.	.	1,959	97,35,210	523	43,49,143	2,957	1,79,96,396	40	4,73,961	182	20,82,903
Germany West	N.A.	1,932	..	..	..	1	12,470
France	1	6,771	..	..	..	..	..
Japan	1	11,898	..	..	..	190	13,85,696
Belgium	1	17,508	..	..	..
Canada
Italy
Singapore	1	10,624
TOTAL .												
		2,043	1,06,07,731	548	46,07,31	2,996	1,83,89,648	48	5,78,812	382	35,61,109	

APPENDIX XV—(contd.)

1	2	13	14	15	16	17	18	19	20	21	22	23	24	
4. Jeeps & Landrovers—(contd.)														
U. K.	.	.	9	93,618	2	20,401	6	85,836	18	1,75,465	15	2,29,242	18	2,21,851
U.S.A.	.	.	196	25,20,787	117	15,56,067	214	26,89,634	..	..	49	6,14,208	136	23,20,916
Germany West.	.	2	58,606	..	..	..	..	..	1	11,158	..	..	2	33,207
France
Japan	.	100	7,64,252	1	9,544	..	..	..	1	11,405	2	35,244	..	..
Belgium
Canada	1	30,000	..
Italy	1	8,774	2	30,443
U.S.S.R.	5	43,470	1	14,300	..	..
Denmark	.	1	11,175	..	..	..	..	..	..	..	..	..	..	..
Burma	1	13,345	..	..	..	..	..	..	..
Others	154	19,67,315	..	..	..	..	..
TOTAL		308	34,48,438	120	15,86,012	221	27,88,815	179	22,08,813	68	9,01,768	154	26,35,517	..

1	2	13	14	15	16	17	18	19	20	21	22	23	24
5. Chassis with Engines mounted on vehicles													
U. K.	8	2,91,839	50	17,62,850	..	..
Denmark.
Germany West	..	1	5,571	..	..	..	..	..	..	..	..	..	..
U. S. A.	..	1	11,051	..	..	..	..	..	..	1	15,642	..	..
Indonesia.
France	..	1	9,482	..	..	..	..	..	..	1	9,883	..	..
Belgium	1	28,040	..	..
TOTAL	..	3	26,104	..	..	..	..	8	2,91,839	53	18,16,415	..	..

6. Buses whether or not assembled

U. S. A.	..	..	..	..	..	..	..	..	..	1	33,503	1	22,896
Germany F. Rep.	..	..	..	..	..	..	..	..	..	1	13,793	3	52,650
Italy	..	..	..	..	..	..	..	..	..	1	21,816	..	..
U. K.	..	..	..	..	..	..	..	..	..	18	6,92,779	3	89,990
Japan	..	..	..	..	..	..	..	..	..	..	..	1	20,234
TOTAL	..	..	..	..	..	..	..	..	..	21	7,61,891	8	1,85,770

APPENDIX XV—(contd.)

1	2	13	14	15	16	17	18	19	20	21	22	23	24
<i>7. Lorries Trucks whether or not assembled</i>													
	U. S. A. . . . .	..	..	..	..	..	..	..	..	48	53,27,006	41	32,35,226
	Australia . . . . .	..	..	..	..	..	..	..	..	2	90,556	..	..
	Japan . . . . .	..	..	..	..	..	..	..	..	12	11,46,191	12	8,37,900
	Hungary . . . . .	..	..	..	..	..	..	..	..	46	12,78,208	27	7,71,591
	U. S. S. R. . . . .	..	..	..	..	..	..	..	..	27	46,29,400	..	..
	Germany F. Rep. . . . .	..	..	..	..	..	..	..	..	1	35,600	1	17,742
	Yugoslavia . . . . .	..	..	..	..	..	..	..	..	..	..	3	3,74,898
	Italy . . . . .	..	..	..	..	..	..	..	..	21	9,66,052	4	2,70,782
	U. K. . . . .	..	..	..	..	..	..	..	..	9	4,94,945	14	12,06,276
	France . . . . .	..	..	..	..	..	..	..	..	..	..	8	2,74,994
	Newzealand . . . . .	..	..	..	..	..	..	..	..	..	..	1	70,616
	Sweden . . . . .	..	..	..	..	..	..	..	..	..	..	2	47,981
<hr/>													
	TOTAL . . . . .	..	..	..	..	..	..	..	..	166	1,39,67,958	113	71,08,006

APPENDIX XV—(contd.)

1	2	3	4	5	6	7	8	9	10	11	12
11. Chassis with Engines mounted of vehicles in 73203											
U. K.	292	48,73,091	870	1,10,26,365	588	39,75,241	4	2,15,002	83	13,93,002	
Germany West	665	71,68,939	96	6,87,167	2,976	1,98,09,379	..	..	45	2,69,574
Italy	1	1,308	..	..	..	..	..	..	..	..
U.S.A.	287	21,93,825	37	3,76,094	60	5,15,750	..	..	103	14,36,021
France. . . . .	..	..	..	..	..	..	..	..	..	..
Japan . . . . .	..	..	..	..	..	..	..	..	190	13,32,961
Switzerland . . . . .	..	..	..	..	..	..	..	..	..	..
U.S.S.R. . . . .	..	..	..	..	..	..	..	..	..	..
Australia . . . . .	..	..	..	..	..	..	..	..	..	..
Canada . . . . .	..	..	..	..	..	..	..	..	..	..
TOTAL		1,245	1,42,37,163	1,003	1,20,89,526	3,524	2,43,00,370	4	2,15,002	391	44,31,558
12. Fire Engines											
U. K.	26	9,98,970	23	19,76,294	8	2,63,911	..	..	3	1,55,415
Italy	2	36,413	..	..	..	..	..	..	..	..
U.S.A.	1	1,09,493	..	..	..	3	41,163	..	..	..
Germany West . . . . .	..	..	..	..	..	..	..	..	2	40,226
TOTAL		29	11,44,876	23	19,76,294	11	3,05,074	5	1,95,681

13. *Motor Omnibuses*

U.K..	.	.	.	51	16,90,512	83	21,47,186	36	11,78,009	..	..	34	11,88,192
Sweden	.	.	.	3	146	..	..	..	..	..	..	..	..
Italy	.	.	.	500	4,71,240	..	..	2	53,692	..	..	..	..
U.S.A.	.	.	.	1	20,980	14	3,12,604	1	26,906	..	..	1	23,868
Germany West	.	.	.	..	..	..	..	..	..	..	..	5	1,08,259
Japan	.	.	.	..	..	..	..	..	..	..	..	..	..
<hr/>													
TOTAL	.	.	.	555	21,82,878	97	24,59,790	39	12,58,607	..	..	40	13,20,319

APPENDIX XV—(contd.)

	1	2	13	14	15	16	17	18	19	20	21	22	23	24
11. Chessis with Engines mounted of vehicles in 73023														
U. K.			1	12,020	20	1,71,241	31	4,26,283	2	1,19,234	..	..	..	..
Germany West	1	10,372	67	15,36,312	1	11,271	..	..	..	..
U.S.A.			4	4,26,818	3	3,10,320	28	15,05,480	..	..	..	..	..	..
Italy	16	3,29,417	..	..	..	..	..	..
France	2	16,900	..	..	..	..	..	..
Japan	127	16,79,416	..	..	..	..	..	..
Switzerland			1	30,725	..	..	..	..	..	..	..	..	..	..
U.S.S.R.			6	2,72,117	2	3,18,134	..	..	..	..	..	..	..	..
Austria	4	39,625	..	..	..	..	..	..	..	..
Canada	1	17,673	..	..	..	..	..	..	..	..
TOTAL			12	7,41,680	31	8,67,365	271	54,93,808	3	1,30,505	..	..	..	..
12. Fire Engines														
U. K.			4	3,46,890	2	2,60,818	4	3,85,313	5	3,81,351	2	2,58,292	1	2,80,573
Italy
U.S.A.
Germany West
TOTAL			4	3,46,890	2	2,60,818	4	3,85,313	5	3,81,351	2	2,58,292	1	2,80,573

APPENDIX XV—(contd.)

1	2	3	4	5	6	7	8	9	10	11	12
14. Motor Vans etc.—complete											
U. K.	72	15,87,661	16	5,87,470	38	4,78,956	1	8,654	8	4,80,465	
Germany West	230	46,14,206	30	12,04,305	1	28,283	..	..	22	5,44,146	
Belgium	15	3,08,380	..	..	..	..	..	..	..	..
Singapore	1	7,522	..	..	..	..	..	..	..	..
U.S.A.	49	15,94,736	18	13,98,540	204	29,88,232	7	1,99,468	98	25,78,295	
Netherlands . . . . .	..	..	2	57,229	..	..	..	..	1	11,076	
Italy . . . . .	..	..	..	..	3	1,04,224	..	..	..	..
Australia . . . . .	..	..	..	..	..	..	..	..	..	..
Japan . . . . .	..	..	..	..	1	18,383	..	..	917	1,05,90,696	
China . . . . .	..	..	..	..	2	24,464	..	..	..	..
Canada . . . . .	..	..	..	..	5	74,905	..	..	..	..
U.S.S.R. . . . .	..	..	..	..	..	..	..	..	6	3,29,315	
Czechoslovakia . . . . .	..	..	..	..	..	..	..	..	..	..
France . . . . .	..	..	..	..	..	..	..	..	..	..
Switzerland . . . . .	..	..	..	..	..	..	..	..	..	..
Yugoslavia . . . . .	..	..	..	..	..	..	..	..	..	..
Austria . . . . .	..	..	..	..	2	24,127	..	..	..	..
Spain . . . . .	..	..	..	..	..	..	..	..	..	..
TOTAL	367	81,12,505	66	32,47,544	256	37,41,574	8	2,08,122	1,052	1,45,33,993	

15. *Moto Vans etc. complete knockdown*

U. K..	.	.	.	2,853	2,64,62,791	3,253	2,24,67,912	2,309	1,22,94,221	..	..	428	26,11,226
Germany West	.	.	.	6,737	5,61,91,962	5,897	4,46,89,545	2,733	1,88,63,756	..	..	396	13,55,842
Belgium	.	.	.	304	33,36,729	..	..	..	..	..	..	..	..
Italy	.	.	.	398	36,10,241	92	4,72,849	..	..	..	..	..	..
U.S.A..	.	.	.	5,225	4,09,05,756	4,103	1,47,82,153	3,888	2,88,43,205	..	..	4	2,88,169
Netherlands	.	.	.	..	..	64	5,29,590	..	..	..	..	..	..
<hr/>													
TOTAL	.	.	.	15,517	13,05,07,479	13,409	8,29,42,049	9,130	6,00,01,182	..	..	828	42,55,237

APPENDIX XV—(contd.)

1	2	13	14	15	16	17	18	19	20	21	22	23	24
14. Motor Vans etc.—complete													
U.K.	.	.	9	3,11,848	20	7,01,716	44	10,81,286	15	4,89,252	..	..	..
Germany West.	.	.	6	91,079	9	2,97,118	5	1,33,844	9	3,45,030	..	..	..
Belgium
Singapore	1	6,000	..	..	..	..	..
U.S.A.	.	.	14	7,50,008	20	23,40,848	32	16,11,627	61	50,10,374	..	..	..
Netherlands
Italy	1	10,000	..	..	6	3,96,933	..	..	..
Australia
Japan	.	.	200	24,80,054	..	..	3	4,09,293	2	71,962	..	..	..
China
Canada
U.S.S.R.	17	5,43,027	23	10,51,330	30	23,09,975	..	..	..
Czechoslovakia	.	.	2	40,300	1	69,667	..	..	1	55,000	..	..	..
France	.	.	2	1,91,642	3	1,77,122	5	3,12,078	2	1,19,568	..	..	..
Switzerland	.	.	1	60,865	..	..	..	..	..	..	..	..	..
Yugoslavia	.	.	1	35,106	1	27,674	..	..	1	21,243	..	..	..
Austria	2	1,12,289	..	..	..	..	..
Spain	2	3,60,018	..	..	..	..	..
TOTAL	.	.	235	39,70,802	72	41,67,172	117	57,77,765	127	88,19,357	..	..	..

APPENDIX XV—(contd.)

1	2	3	4	5	6	7	8	9	10	11	12
16. Motor Vans Semi knockaown											
Germany West	1	43,429	..	..	..	..	..	..
U. K.	2	65,205	1	1,62,282	..	..
U.S.A.	300	20,66,398
<hr/>											
TOTAL	1	43,429	2	65,205	1	1,62,282	300	20,66,398

17. Motor Vans etc. Secondhand or used

U. K.	.	.	.	2	9,883	..	..	1	13,166	..	..	..
France	.	.	.	..	..	..	..	..	..	..	..	..
Italy	.	.	.	..	..	1	7,558	..	..	..	..	..
U.S.A.	.	.	.	..	..	1	7,136	..	..	..	..	..
Ceylon	.	.	.	..	..	..	..	..	..	..	..	..
Germany West	.	.	.	..	..	..	..	..	..	..	..	..
Poland	.	.	.	..	..	..	..	..	..	..	..	..
Burma	.	.	.	..	..	..	..	..	..	..	..	..

APPENDIX XV—(contd.)

1	2	13	14	15	16	17	18	19	20	21	22	23	24
16. Motor Vans Semi knockdown													
Germany	•	•	•	•	•	•	•	•	•	•	•	•	•
U. K.	•	•	•	•	•	•	•	•	•	•	•	•	•
U.S.A.	•	•	330	27,18,437	•	•	•	•	•	•	•	•	•
TOTAL	•	330	27,18,437	•	•	•	•	•	•	•	•	•	•

17. Motor Vans etc. Secondhand or used

U. K.	•	•	5	91,049	1	11,884	8	49,632	6	63,100	•	•	•
France	•	•	1	5,396	•	•	•	•	1	43,542	•	•	•
Italy	•	•	•	•	•	•	1	12,944	•	•	•	•	•
U.S.A.	•	•	1	13,676	10	96,240	6	1,05,997	36	51,88,106	•	•	•
Ceylon	•	•	1	3,187	•	•	•	•	•	•	•	•	•
Germany West	•	•	1	7,690	•	•	4	34,005	5	1,21,287	•	•	•
Poland	•	•	•	•	1	5,228	•	•	5	49,104	•	•	•
Burma	•	•	•	•	•	•	1	10,902	•	•	•	•	•

APPENDIX XVI

(Vide paragraph 24.1)

Countrywise exports of automobiles from India during the last seven years

Country to which exported	1960-61		1961-62		1962-63		1963-64		1964-65		1965-66		1966-67	
	Nos.	Value	Nos.	Value	Nos.	Value	Nos.	Value	Nos.	Value	Nos.	Value	Nos.	Value
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<i>A. Passenger cars excluding jeeps and landrovers</i>														
	2	13,775	..	..	..	..	..	..	..	..	..	..	..	..
Pakistan East	1	12,438	2	16,634	..	..	..	..	..	..	..	..	..	..
Tanganyika	1	6,550	..	..	..	..	..	..	..	..	..	..	..	..
U.S.A.	1	9,000	..	..	..	..	..	..	..	..	..	..	..	..
Singapore	..	..	1	11,559	1	12,200	..	..	..	..	..	..	..	..
Kenya	..	..	..	..	1	8,100	..	..	..	..	..	..	..	..
Pakistan West	..	..	..	..	1	10,000	..	..	1	13,179	..	..	..	..
Ceylon	..	..	..	..	..	..	2	28,666	..	..	2	25,656	..	..
Nepal	..	..	..	..	..	..	..	..	78	16,93,348	91	23,54,809	217	46,81,211
Malaysia	..	..	..	..	..	..	..	..	..	..	6	1,01,840	..	..
Viet Nam S.	..	..	..	..	..	..	..	..	..	..	5	94,920	..	..
TOTAL	5	41,763	3	28,193	3	30,300	2	28,666	79	17,06,527	104	25,77,225	217	46,81,211

APPENDIX XVI—(contd.)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<i>C. Jeeps and landrovers</i>															
Cambodia	2	32,615	..	..	..	..	..	..	..	..	..	..
Pakistan West	1	11,753	..	..	..	..	..	..	..	..
Iran	1	13,066	..	..	..	..	..	..
Ceylon	1	6,000	..	..
Nepal	2	29,402	4	46,412
Bahrein	1	7,000	..	..
Iraq	1	5,500	..	..
Greece	1	9,500
TOTAL	2	32,615	1	11,753	1	13,066	..	..	5	47,202	5	55,912

D. Buses, Lorries, truck whether or not assembled including special purpose lorries trucks Vans etc.

Saudi-Arab . . . . .	..	..	..	1	24,736	..	..	..	..	..	..	..	..	..	..
Viet Nam. S. . . . .	..	..	..	..	..	..	..	66	11,61,059	..	..	..	4,17,968	101	24,09,680
Thailand . . . . .	..	..	..	..	..	..	..	..	..	1	76,660	5	95,424	..	..

Aden	.	.	.	.	.	.	.	.	.	.	36	9,96,006	25	4,75,358	..	..			
Malaya	.	.	.	.	.	.	.	.	.	.	2	33,947	..	..	2	67,665
Nepal	.	.	.	.	.	.	.	.	.	.	83	24,90,751	1	36,000	22	8,85,100
Malaysia	.	.	.	.	.	.	.	.	.	.	..	..	16	2,59,112	2	67,665
German F. Rp.	.	.	.	.	.	.	.	.	.	.	..	..	1	34,175	..	..			
Bulgaria	.	.	.	.	.	.	.	.	.	.	..	..	10	1,92,857	21	8,51,110
Somalia	.	.	.	.	.	.	.	.	.	.	..	..	2	63,600	2	29,712
Sudan	.	.	.	.	.	.	.	.	.	.	..	..	..	..	6	1,75,266
W. Africa	.	.	.	.	.	.	.	.	.	.	..	..	..	..	2	42,537
Malgasy Rep.	.	.	.	.	.	.	.	.	.	.	..	..	..	..	12	1,78,732
Ceylon	.	.	.	.	.	.	.	.	.	.	..	..	1	20,737	40	10,56,401
Laos	.	.	.	.	.	.	.	.	.	.	..	..	4	1,29,486	..	..			
Bahreïn	.	.	.	.	.	.	.	.	.	.	..	..	1	29,960	..	..			
TOTAL	1	24,736	..	66	11,61,059	122	35,97,364	80	17,54,677	210	57,63,868

APPENDIX XVI—(contd.)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<i>E. Engine Mounted Chassis of Vehicles</i>														
Ceylon.	.	.	13	2,44,519	..	..	..	..	..	..	74	8,93,378	..	..
S. Viet Nam.	.	.	4	67,800	14	2,53,240	28	4,99,234	..	..	31	6,14,141	..	..
Cambodia	15	2,76,839	..	..	..	..	..	..
Laos	8	1,49,525	12	2,28,253	..	..	..	..
Thailand	4	79,476	..	..	..	..	..	..
Sudan	40	6,38,320	..	..	..	..
Pakistan West	30	7,97,493	..	..	..	..
Aden	2	36,924	..	..	..	..
Germany East	2	34,818	..	..	..	..
Malaysia	22	3,66,624	..	..
Yugoslavia	1	4,200	..	..
Total														
		13	2,44,519	4	67,800	14	2,53,240	56	17,35,808	86	17,35,808	128	18,78,343	..